

**DEMENTIA CARE IN REMOTE NORTHERN COMMUNITIES:
PERCEPTIONS OF REGISTERED NURSES**

A Thesis Submitted to the College of
Graduate Studies and Research
In Partial Fulfillment of the Requirements
For the Degree of Doctor of Philosophy
In the College of Nursing
University of Saskatchewan
Saskatoon, Saskatchewan

By

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ABSTRACT

Little is known about Registered Nurses (RNs) and their work in northern Canada and the care of older adults with dementia in this setting. As the prevalence of dementia is predicted to increase over the next 30 years, the purpose of this project was to discover key concepts that depicted salient issues in dementia care in northern Saskatchewan from the perspective of RNs working in northern health care facilities. A sequential exploratory mixed method design was chosen for this study with a qualitative lead complemented by a secondary analysis of quantitative data.

Interviews were conducted with 14 RNs, employed in small northern Saskatchewan communities, about their experiences with dementia caregiving and their perceptions of dementia care resources. The grounded theory method used in analysis of the interview data resulted in the construction of the theory, ***Insulating and Expanding the Awareness of Dementia in Northern Nursing***. The study identified three categories of conditions that influenced awareness of dementia: *Dementia Care and Community Caregiving, Characteristics of the Northern RN, and Northern Nursing Worklife*.

The quantitative secondary analysis, using a north-south comparison of data from the national survey (Stewart et al., 2005) in the multi-method study “The Nature of Nursing Practice in Rural and Remote Canada” (MacLeod et al., 2004), was used to explore contextual elements identified in the grounded theory analysis. The comparison of nursing practice in northern (n = 597) and southern (n = 2154) rural and small town communities found that fewer RNs in northern Canada reported dementia as a client characteristic, worked in long-term care, or in home

care nursing positions, compared to RNs in southern Canada. Findings from both the qualitative and quantitative studies contribute to an understanding of the RNs' awareness of dementia. Recommendations for increasing the awareness of dementia in northern nursing practice include enhancing the resources and services available to older adults with dementia in small northern communities. It is hoped that further exploration of dementia within northern communities will result in improved care for individuals with dementia and their families.

ACKNOWLEDGEMENTS

I would like to express my deepest appreciation to my thesis supervisors, Dr. Norma Stewart and Dr. Debra Morgan, for their support, guidance, and encouragement throughout my doctoral program. Completing this mixed methods project was made entirely possible through the combined expertise and collaboration of these two scholars, and the way they so willingly shared their knowledge. Thank you to my Advisory Committee, Dr. Dorothy Forbes, Dr. Margaret Crossley, Dr. Andrew Kirk, and the external examiner, Dr. David Gregory. Your contributions to this project were invaluable. I would also like to thank all the members of the Canadian Institute for Health Research New Emerging Team “Strategies to Improve the Care of Persons with Dementia in Rural and Remote Areas” for sharing their expertise in dementia assessment, diagnosis, treatment, and insights into family caregiving.

I am grateful to many individuals and agencies for their assistance in completing my graduate education. To Dr. Debra Morgan for the Canadian Institute for Health Research doctoral scholarship associated with the New Emerging Team “Strategies to Improve the Care of Persons with Dementia in Rural and Remote Areas,” the Northern Scientific Training Program for financial assistance with travel, Northern Medical Services for in-kind travel assistance, and the College of Nursing and St. Paul’s Hospital Alumni for financial assistance in the form of scholarships and bursaries. I would also like to thank the Telehealth Saskatchewan and the Saskatoon Health Region Telehealth Staff for providing access to telehealth for data collection.

I would like to extend my gratitude to the northern nurses' that participated in this project for sharing their insights into the practice of northern nursing and dementia care. It was indeed a pleasure to share time with you in the north. I also extend my thanks to the supervisors and administrators in the three northern health regions, Athabasca, Keewatin Yatthé, and Mamawetan Churchill River, for allowing me to contact the nurses in their regions. I must also include a thank you to all the people I meet in my travels, and those I became reacquainted with, as returning to the north to do this research project made me reminiscent of my years in the north – and reaffirmed the old saying, “You can take the nurse out of the north, but you cannot take the north out of the nurse.”

Last, but never least, I wish to extend a special thanks to my husband Mike for his continued support of my pursuit of further education, without whom I could not have come this far, and to my children Chelsea and Courtney for their support, patience, and motivational speeches. To my extended family, friends, colleagues, and fellow students, I am grateful for your ear and support.

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1 CHAPTER ONE – INTRODUCTION AND LITERATURE REVIEW

1.1 Introduction

Northern nursing predominantly associates the role of Registered Nurses (RNs) with the provision of a wide spectrum of health care services to the people who reside in small northern communities. Research interest in the practice of northern nursing in Canada, although growing, has been limited (MacLeod et al., 2004). To date, research has focused on the practice roles of the RN (MacLeod, Browne, & Leipert, 1998; Tarlier, Johnson, & Whyte, 2003; Stewart et al., 2005; Vukic & Keddy, 2002), issues related to recruitment and retention (Minore, Boone, & Hill, 2004; Minore et al., 2005), and continuing education (Kosteniuk, D'Arcy, Stewart, & Smith, 2006; Kulig et al., 2006; Silverman, Goodine, Ladouceur, & Quinn, 2001; Tilleczek, Pong, & Caty, 2005). This increase in knowledge surrounding northern nursing has laid the foundation from which research can now begin to explore the clinical practice of northern RNs in relation to specific health challenges and the care provided to specific client groups. Focusing on clinical practice will assist in the identification of culturally and geographically relevant health issues and the associated effects on health outcomes. This project adds to this developing body of clinical practice research by exploring the availability of nursing services for older adults with dementia in northern Saskatchewan.

1.2 Purpose of the Study

The purpose of this study was to explore dementia care within the older adult population in northern Saskatchewan from the perspective of RNs who work in northern health care facilities (hospitals, long-term care facilities, home care services, and nursing stations) and to identify similarities and differences between elements of northern and southern rural and remote Canadian nursing practice that enhance our understanding of dementia care. The following question guided this investigation: **What do RNs in northern Saskatchewan perceive as key issues and concerns associated with the care of older adults with dementia?** To answer this question a sequential exploratory mixed method design was used with a qualitative lead and a subsequent quantitative secondary analysis (Creswell, 2003; Creswell, Clark, Gutmann, & Hanson, 2003). The aim of the qualitative grounded theory method was to provide insight into: (1) the exposure of Saskatchewan RNs to older adults with dementia in northern Saskatchewan communities, (2) the caregiving experiences of RNs who have provided services to older adults with dementia, (3) the perceptions of RNs on the adequacy of services for all stages of care provided by northern health care agencies to this client population. In addition, this study contributes to the New Emerging Team (NET) project “Strategies to Improve the Care of Persons with Dementia in Rural and Remote Areas” (Morgan et al., 2005).

The quantitative secondary analysis, using a north-south comparison of data from the national survey in the multi-method study “The Nature of Nursing Practice in Rural and Remote Canada” (Stewart et al., 2005), provided an opportunity to explore contextual elements of dementia care that were identified in

the grounded theory analysis. Including a secondary analysis of the national survey data, guided by the grounded theory, contributed depth to the analysis of the research problem (Morse, 2003), as little is documented regarding the care of persons with dementia in northern Saskatchewan and the broader context of dementia care in northern Canada.

The main concern that became the focus of the analysis was that dementia care was not a priority for RNs practicing in northern Saskatchewan. Through the analysis of the interviews with the northern RN participants a theory was constructed, *Insulating and Expanding the Awareness of Dementia in Northern Nursing*, that provided insight into the conditions surrounding the care of older adults in northern Saskatchewan and in northern Canada. The process, *Insulating and Expanding Awareness*, contributes to knowledge about northern dementia care that can help to understand and explain a RN's level of awareness of dementia within the practice of northern nursing.

1.3 Relevance and Significance

Most of the existing literature on dementia care provided by Registered Nurses (RNs) pertains to nursing homes and hospitals in urban settings rather than rural, remote or northern nursing workplaces in Canada (Morgan et al., 2002a). Further, a limited amount of research has focused on the nature of health care services available to older adults with dementia in northern Saskatchewan, or indeed, in northern Canada (Hendrie et al., 1993). One previous study on dementia caregivers in northern Canada suggested that resources for caregiver support and respite were limited in northern communities (Loos & Bowd, 1997). However,

northern practicing RNs were not found to contribute to the literature about the care of older adults with dementia.

A global estimate of the prevalence of dementia suggested that in developed countries the number of individuals diagnosed with dementia might possibly increase by 100% between 2001 and 2040 (Ferri et al., 2005). Predictions from the Canadian Study of Health and Aging (CSHA) are that approximately 60,000 new cases of dementia will be diagnosed each year, and the prevalence of dementia is suggested to increase to approximately 778,000 potential cases by 2031 (CSHA Working Group, 2000). Dementia affects approximately 8.0% of all Canadians over the age of 65 years and 34.5% over the age of 85 years (CSHA Working Group). However, CSHA data collection excluded rural areas, reservations, the Yukon, Northwest Territories (NWT) and Nunavut, which limits the information available about older adults with dementia and dementia care services in non-urban northern and southern Canada.

According to the Statistics Canada 2006 census data (2007a) the fastest-growing segment of the Canadian population “between 2001 and 2006 consisted of individuals aged 55 to 64” (p. 2) and “the province with the highest proportion of seniors was Saskatchewan” (p.3). This age group, commonly known as the baby-boomers, presents concerns in relation to dementia as rates of dementia increase with increasing age (CSHA Working Group, 2000). Although Aboriginal seniors, inclusive of First Nations, Métis, and Inuit people, made up only one percent of the senior population in Canada in 2001 that were 65 years of age or older, three percent of the population of Saskatchewan seniors were of Aboriginal descent (Statistics Canada, 2007b). The small population percentages for the

Aboriginal seniors populations can be related to their lower life expectancy compared to non-Aboriginal Canadians (76.7 years for women Native American and 71.1 years for men), although this segment of the Aboriginal population is projected to double by 2017 (Statistics Canada, 2005). A concern for Aboriginal seniors in relation to dementia care that arises from the statistical data was that over half of Aboriginal seniors live in non-urban areas, and rural areas have been reported to have a limited amount of dementia care resources (Bedard, Koivuranta, & Stuckey, 2004).

The current study did not attempt to identify the prevalence of dementia in the older adult population of northern Saskatchewan. Current data about the prevalence of dementia in this population is unavailable. However, the study findings included the RNs' perspectives on the small number of older adults with dementia encountered in their northern practice and the complexity in the range of issues and concerns that were perceived as relevant to the care of northern older adults with dementia. Therefore, this study is relevant as it contributes by increasing the body of knowledge on the northern practice of RNs and health care services provided to older adults with dementia in northern communities.

1.4 Literature Review

The literature reviewed for this study pertains to dementia, dementia caregiving, northern health care, and northern nursing practice. Issues and concerns for northern RNs and northern people regarding dementia care have not been well documented in the literature. Therefore, this literature review will explore known concerns about dementia from primarily urban and rural perspectives. Further, a limited amount of research has been performed to date that

investigates northern nursing practice (Macleod et al., 2004). This review will present the known challenges in this practice setting and literature that contributes information about older adults in northern communities.

One of the challenges in presenting literature on rural, remote, and northern areas in Canada is the large number of definitions of these terms (Pitblado, 2005). Readers should be aware that this literature review presents *rural, remote and northern* as reported in the literature, and that consistency in the use of these terms is not synonymous with any one definition. Of particular concern is the use of the word *remote* for describing both northern and southern locations in Canada. Therefore, for the purpose of this research project the words *north, south, northern or southern* will be used when describing geographical locations within Canada. The “north-south line” proposed by McNiven and Puderer (2000) for Statistics Canada (Appendix A) is the reference line used to geographically situate north and south for this study. When this study refers to nursing in northern Canada, it is referring to the geographical area north of the north-south line. Further description of McNiven and Puderer’s north-south line can be found in chapter four (See Chapter Four - Quantitative Method, 4.2.1 Design).

1.4.1 Dementia

The definition of dementia has seen much refinement over the past century, aided by the exponential growth of research and the corresponding scientific literature (Drachman, 2006). Historical hypotheses about the etiology of dementia have been documented as originating from either the hypotheses of a “discontinuity” model of dementia (i.e., as a human weakness or disease affecting only some individuals) or a “continuity” model (i.e., as a condition that comes

naturally with aging) (Berrios, 1994). The present conceptual view of dementia is that it is a syndrome characterized by an impairment in memory resulting directly from the physiological consequence of either a medical condition, substance, or multiple disease etiologies (American Psychological Association [APA], 2000).

Most researchers agree that cognitive decline associated with aging and dementia are not synonymous, and that the primary features of dementia are memory and functional impairment with adult onset. Recent discussions on dementia from the Third Canadian Consensus Conference on diagnosis and treatment of dementia suggested changes to the DSM-IV-TR diagnostic criteria where cognitive impairments in two domains (memory, language, motor skills, object recognition, or abilities associated with abstract thinking, judgement and sequencing) of which one may or may not be memory impairment, would be the basis for a diagnosis of dementia (Rockwood, Bouchard, Camicioli, & Leger, 2007). This is evident in the diagnostic criteria for frontotemporal dementia that is based on a clinical presentation that concerns behavioral or language deficits (McKhann et al., 2001). This shift in the current diagnostic criteria for dementia, from one predominantly centred on impairment of memory, can be related to the enormous current interest in dementia and cognitive impairment research and the goal of evidence-based data leading the construction of new diagnostic criteria (Rockwood et al.).

1.4.1.1 Diagnostic Criteria

At present the Diagnostic Statistical Manual (DSM-IV-TR) of the American Psychiatric Association (APA, 2000) is the most commonly used source for the diagnostic criteria of dementia in Canada and the western world

(Burns, 2002). The DSM-IV-TR (APA) describes the diagnostic features of dementia as “the development of multiple cognitive deficits” (p. 148) which include impairment in both long and short term memory (Criterion A1), coinciding with the occurrence of an impairment in at least one of the following areas (Criterion A2): language (aphasia), motor skills (apraxia), object recognition (agnosia), or abilities associated with abstract thinking, judgement and sequencing in planning (executive functioning). A diagnosis of dementia results when the impairment in memory and one or more items in Criterion A2 increases to a level of severity where cognitive impairment interferes with an individual’s functioning at work, in relationships, and in social interactions as compared to what has been perceived as the lifetime norm for the individual.

Figure 1 summarizes criterion items from the DSM-IV-TR (APA, 2000, p. 148-150). The DSM-IV-TR (APA) also describes other associated features of dementia including a limited awareness of memory loss, gait disturbances, and violent episodes. Delusions of persecution, visual hallucinations, and episodes of delirium are also stated as features that have been associated with dementia.

Physical findings and prognosis in dementia may be dependent on the progression of the pathology of an associated illness (APA, 2000). The differential diagnoses of dementia described in the DSM-IV-TR (APA) include multiple disorders and illnesses in which dementia is a feature. These include Alzheimer’s disease (AD), vascular dementia (VaD), neurodegenerative diseases (e.g., Lewy body disease), Huntington’s disease, Parkinson’s disease, head injury, alcoholism and other drug abuse, HIV (Ungvarski & Trzcianowska, 2000), and Creutzfeldt-Jakob disease (Beattie, Daker-White, Gilliard, & Means, 2002). Dementia related

to the coexistence of AD and VaD also has been termed mixed dementia (Zekry, Hauw, & Gold, 2002).

Figure 1.1 *DSM diagnostic criteria*

Criterion	Cognitive Disturbance	Examples of Cognitive Disturbances	Examples of Testing Items
A1	Memory	Decreased ability to learn new information or to recall previously known information, misplacing common items such as keys, progressing to an inability to identify family members or former occupation.	Repeat and time lapse recall of a list of words. Recall information of personal interest such as sports.
A2a	Aphasia	Increasing difficulty in naming objects, locations, or family members. Language problems include referencing objects with vague expressions such as “it”, decreasing understanding of speech and written words and progression to total loss of ability to speak.	Naming objects. Following commands. Repeating phrases.
A2b	Apraxia	Impaired ability to complete common tasks, such as combing hair or drawing. Assessed limitations are not evident in motor ability, function of senses or understanding of directions.	Pantomime actions of tester. Demonstrate tasks such as brushing teeth or assembling a set of blocks.
A2c	Agnosia	Inability to visually recognize or name familiar objects such as a chair, or identify a pencil using their sense of touch, although vision and tactile sensory function are intact.	Identifying objects visually or through exploration of an object.
A2d	Executive functioning	Problems related to abstract thinking, motivation, sequencing tasks or planning actions. Common in dementia potentially related to frontal lobe disorders.	Identifying similarities between two abstract concepts.

APA (2000, p. 148-150)

The DSM-IV-TR (APA, 2000) lists cultural and education features that might influence results of dementia testing such as the ability to recall family birthdays in cultures where birthdays are not celebrated or the ability to recall the names of American presidents for non-American individuals. Age features are associated with etiology (APA), and the prevalence increases with advancing age (CSHA working group, 2000). Alzheimer's disease (AD) and vascular dementia (VaD) are reported in the DSM-IV-TR (APA) as the two most common types of dementia, although researchers have suggested that Dementia with Lewy Bodies (DLB) will be reviewed for inclusion in the next edition of the DSM as investigations have identified DLB as a specific subtype of dementia. Summaries of the criteria for the following different dementia subtypes can be found in Appendix B: Alcohol Related Dementia (ARD), Alzheimer's Disease (AD), Dementia with Lewy Bodies (DLB), Frontotemporal dementia (FTD), Vascular Dementia (VaD), and Mild Cognitive Impairment (MCI).

1.4.1.2 Assessment

Clinical diagnosis of dementia includes identifying the cause of the cognitive impairment, which may be a treatable non-dementing process, delirium, or depression (Rockwood et al., 2007). When an illness that is associated with dementia is identified, the severity and character of cognitive impairment is commonly assessed in conjunction with the degree of illness and the potential for other psychiatric disorders such as depression (APA, 2000). Diagnostic assessments include a review of the patient's medical history, a physical exam, and evaluation of depression, delirium, and cognitive status (Beck, Cody, Souder, Zhang, & Small, 2000). Physical assessment results may identify treatable

physiological imbalances that affect cognition (Freter, Bergman, Gold, Chertkow, & Clarfield, 1998).

Referral to neurology, neuropsychiatry, or a geriatric specialist in dementia has been stated as an important element in diagnostic assessment (Beck et al., 2000). Other elements in the assessment process commonly include neuro-imaging that can support the findings of assessments, and over time, the progression of the disease (van der Flier et al., 2005). Studies have also indicated that research using electroencephalography (EEG) might be an inexpensive tool that could contribute to the differentiation of dementias (Admais, Sahu, & Treloar, 2005).

Another important set of tools for assessment of cognitive deficits is neuropsychological testing (Sano, 2007). Neuropsychological assessments include testing for deficits in cognitive abilities such as current intellectual functioning, orientation, attention, verbal and non-verbal memory, verbal fluency, naming of items, and executive functioning (Petersen & Lantz, 2002). Neuropsychological testing has been suggested as providing a contribution to clinical data in diagnostic assessment for dementia, differentiating between different types of dementias, early detection of cognitive loss, and identifying potential interventions (Sano; Savla & Palmer, 2005). The diagnosis of dementia, even with the use of diagnostic tools, remains primarily based on observational data and judgment of the combined clinical data.

The process involved in dementia assessment and diagnosis can be overwhelming and has been reported as one reason for delaying diagnosis (Sternberg, Wolfson, & Baumgarten, 2000). There is also evidence that suggests that differentiating between MCI that can precede AD, and memory loss that does

not have emerging pathology, poses difficulty and hesitation in requests for formal assessment (Shah, Tangalos, & Petersen, 2000). The literature also suggests that there is a strong need for individuals and families to bring their concerns forward to a physician for assessment as often the first indication that an older adult is experiencing cognitive problems occurs during a crisis situation (Boise, Neal, & Kaye, 2004; Borson, Scanlan, Watanabe, Tu, & Lessig, 2006). In AD, memory loss has been described as insidious and can include a period of concealment preceding diagnostic investigation related to a need to “preserve feelings of self-worth, identity and control” (Keady & Gilliard, 1997, p. 245). A diagnosis of dementia coinciding with a health crisis (e.g., stroke leading to vascular dementia) or with a progressive neurological disease (e.g., Parkinson’s disease) are reported more frequently because of a higher associated incidence and known relationship with these disorders (Lindsay, Hebert, & Rockwood, 1997; Wientraub, Moberg, Duda, Katz, & Stern, 2004).

The most common impetus for diagnostic evaluation is a realization of memory problems by the individual, or their family and social contacts, or associated with upsetting behavior in social situations. Thomas and O’Brien (2002) described behavioral changes that have been reported in dementia categorized as psychotic symptoms or possible alterations in mood or motivation. Psychotic symptoms include delusional ideas and beliefs (e.g., believing that misplaced articles have been stolen), hallucinations (e.g., seeing and speaking to people who are not physically present in a room), and misidentification of individuals (e.g., mistaking a son for a husband). Subtle changes in mood or motivation that may initially go unaddressed but increase in level of concern

include apathy (e.g., lethargy), agitation (e.g., wandering, repeated dressing and undressing), aggression (e.g., verbal and/or physical, or increasing frustration with common tasks), sleep disturbances (e.g., up during the night related to distortions in sleep cycles), changes in eating habits (e.g., progressing to dependency for awareness of meal times) and personality changes (e.g., depression or unsubstantiated suspiciousness of motives of family members). Dementia and depression have been reported as the two most common medical problems in older adults (Leplaire & Buntinx, 1999). However, the association between depression and dementia severity has not been confirmed, and in some instances depression has been misdiagnosed as signaling cognitive impairment (Maynard, 2003).

1.4.1.3 Barriers to Assessment

In a secondary analysis of the Canadian Study on Health and Aging, Sternberg et al. (2000) found that 64% (N = 252) of community based subjects diagnosed during the study had either not been diagnosed by their physicians or had not seen a physician for memory problems. One of the concerns raised by the authors was that assessment for dementia by health care providers was not standard practice with older adult clients. As the number of older adults in Canada is expected to increase, there is a corresponding increased need to educate health care providers regarding assessment of early stages of mild cognitive impairment and clinical care strategies (Shah, Tangalos, & Petersen, 2000). Early identification of cognitive decline in AD has been shown to benefit from treatment strategies that can decrease or delay memory impairment (Murray et al., 2002).

The assessment of cognition in older adults by physicians and nurses has been suggested as dependent on their knowledge of dementia and the availability

of resources to assist in assessment and diagnosis. Iliffe et al. (2005) reported on the results of multidisciplinary focus groups conducted in Europe that explored the recognition and care of clients with dementia. Findings indicated that the process involved in assessment and diagnosis contained challenges on three levels. First, there was a perception of a lack of awareness of early stage dementia by the general population where only late stage dementia symptoms were associated with disease. Second, general practitioners could be uncomfortable diagnosing dementia for legal and ethical reasons (e.g., the client's loss of his/her drivers license or the need for a health care decision-maker), or work in an area with limited exposure to older adults with dementia. Third, challenges were perceived in the generalist to specialist practice pathway where older adults were passed on to another professional, "on a conveyor belt of clinical services" (Iliffe et al., p. 5). For professionals working in the community, assessment and diagnosis were seen as in need of support of teams and service networks to provide integrated services for older adults with dementia and their caregivers. However, professional education was suggested as necessary to increase the knowledge base about both the assessment and diagnosis of dementia and, more importantly, the professional's responsiveness to the care needs of the individual with dementia (Iliffe & Manthorpe, 2004).

Early recognition of dementia has been identified as a means to enable the best possible results from treatment and ongoing support of the client and their families (Wilkinson & Milne, 2003). However, although symptoms of memory impairment may be apparent to a spouse or family members, one study found that the delay between recognition and when the older adult was brought forward for

assessment was up to two years in length (Wackerbarth & Johnson, 2002). As many older adults experiencing cognitive decline are living in the community, nurses who practice in the community with older adults need to be able to assess for dementia. In an exploration of community nurses' perspectives on dementia, Manthorpe, Iliffe, and Eden (2003) reported differences in the knowledge and experiences of different nursing specialties, where community mental health nurses were identified as more comfortable with assessments versus the community health nurses or practice nurses (i.e., primary care nurses). Based on these findings, the study suggested ongoing continuing education for nurses in the community so that any community-practicing nurse would have the knowledge and tools to assess older adults that they encounter in their practice. Rural nurses are often the access point for care in small communities and therefore may also provide the initial assessment and referral for older adults with dementia as well as their ongoing care.

Hospital based health professionals have also been identified as a source for early recognition of older adults with MCI (Bickel, Mosch, Seigerschmidt, Siemen, & Forstl, 2006). Although MCI can be a transitory state in older hospitalized patients, Bickel et al. noted that these patients might benefit from interventions as a potential at-risk group. Other research on hospitalized older adults with psychiatric conditions has identified that dementia was either not recognized in this population or was diagnosed without a supporting assessment (Bekkelund, Kujala, & Rosenvinge, 2001).

The use of cognitive assessment tools to evaluate memory and functional impairments also present challenges in the assessment process. As previously

stated, the DSM-IV-TR (APA, 2000) lists cultural and education features that might influence results of dementia testing. Wood, Giuliano, Bignell, and Pritham (2006) looked at the use of the Mini Mental Status Exam (MMSE), the most commonly used screening tool, in assessment of cognition in a sample of older Black and White American women. They concluded, after adjusting scores for age and years of education, that racial differences and literacy levels needed to be taken into consideration when using the MMSE. Valcour, Masaki, and Blanchette (2002) looked at the use of the “No ifs, ands, or buts,” statement in the MMSE with Asian-Americans in Hawaii. Their findings indicated that independent of cognitive status, 68% of participants were not able to repeat the phrase. Further, Nishiwaki et al. (2004) explored the use of the Clock-Drawing Test as a screening tool, concluding that this tool had value when the impairment was moderate to severe but limited in its ability to identify mild cognitive impairment. These authors contend that the users of screening tools need to be knowledgeable and sensitive to the cultural context of the client.

Although many researchers have argued for the standardization in the use of assessment tools in dementia (Diaz et al., 2005) there is also a need to balance standardization with cultural and geographical appropriateness. One tool that has been developed at the University of Saskatchewan is the Grasshoppers and Geese Test (Lanting, Crossley, Morgan, & Robertson, 2006) that assesses semantic memory. Through the use of cultural and geographically relevant picture triads, where two of the three are related, semantic memory is assessed. Lanting et al. identified that semantic testing contributes to assessment data by providing clues that assist in the differentiation of the types of dementia, such as the semantic

dementia variant of FTD and a potential lesser degree of semantic impairment in adults with early stage AD. These researchers also identified that the Grasshoppers and Geese Test was geographically appropriate in assessing semantic memory in older adults living in rural and remote areas of Saskatchewan.

1.4.1.4 Challenges in Cross-Cultural Assessment

Challenges in cross-cultural assessment of dementia have been explored and include language as a barrier in the use of assessment tools. Cattarinich, Gibson, and Cave (2001) examined the usefulness of assessment tools for Canadian Aboriginal seniors. They reported that one of the largest challenges in the creation of cognitive testing tools was the numerous Aboriginal languages and dialects across the country. Other elements that can limit usefulness of assessment tools with Aboriginal populations were reported as the lack of culturally relevant content, such as naming objects or landmarks, that need to be geographically and experientially appropriate for assessment purposes (Kristjansson, Desrocher, & Zumbo, 2003).

Hall et al. (1993) reported results from the development of the Community Screening Interview for Dementia (CSI 'D), in English and Cree, using participants from a small northern Aboriginal community and a White urban sample in Winnipeg, Manitoba. The screening tool consisted of a cognitive test and an informant interview. The informant interview was found to produce comparable results between the two groups, although challenged by the need to find reliable informants, while the lower level of formal education of older Aboriginal adults was a factor that affected the results of cognitive testing. Cattarinich, Gibson, and Cave (2001) suggested that the CIS 'D was better than

most screening tools as it included culturally relevant references for place, time, familiar people and events. A limitation for the use of the tool included the need for revision of the wording in some of the questions to a format that would be more respectful of cultural norms in conversation (e.g., questions are posed respectfully versus in a manner that might be misinterpreted as a demand).

The use of translators and “bicultural researchers/health practitioners” for testing was suggested as a method of improving the accuracy of an assessment and decreasing the potential for interviewers to be inattentive to cultural social norms in assessment interviews (Cattarinich, Gibson, & Cave, 2001, p. 1476). The use of translators assists in identifying concepts such as self-perception or attitudes that may not translate into a literal synonym in another language (Kristjansson, Desrocher, & Zumbo, 2003). Kaufert and Shapiro (1996) suggested the use of a community interpreter rather than family members because family members were perceived as responding to questioning with the desire to give the correct answer and avoid untoward consequences such as the hospitalization of the older adult. Hospitalization of older adults often is not possible within northern communities, as most communities do not have a hospital facility, resulting in a separation from their family.

1.4.1.5 Risk Factors for Dementia

Numerous risk factors have been investigated in an effort to determine the etiology of dementia. Risk factors strongly associated with the development of dementia are age, family history, apolipoprotein E gene, and Down’s syndrome (Jorm, 2002). The strongest of these correlates is age (CSHA, 2000). Other risk factors that have been investigated include: limited trace elements (calcium and

zinc) in the drinking water in China (Emsley et al., 2000), education attainment (Callahan et al., 1996; Cobb et al., 1995), gender (Gao et al., 1998), occupation (Stern et al., 1994), obesity (Cournot, et al., 2006) and rural residence (Hall et al., 2000). Hendrie (1998) provides a substantial review of the literature on risk factors indicating that other than age, most risk factors do not provide any degree of certainty for acquiring dementia. However, the risks for vascular disease and stroke are better known (e.g., hypertension, heart disease) and provide ample evidence of associated risk for vascular dementias (Ukaintseva, Sloan, Arbeev, & Yashin, 2006).

The only study of dementia in northern Canada was conducted by Hendrie et al. (1993) who found cardiovascular disease and alcoholism as contributing factors in the subjects that were diagnosed with dementia. Cardiovascular disease and stroke are leading causes of disability and illness in Canada (Heart and Stroke Foundation, 1999). Risk factors that have been reported as increasingly prevalent among First Nations and Inuit populations are associated with the increasing rates of cardiovascular disease, hypertension, diabetes and high cholesterol (Heart and Stroke Foundation). In a recent retrospective study, the occurrence of cardiovascular risk factors at midlife increased the risk for developing VaD in later years by 20% to 40% (Whitmer, Sidney, Selby, Claiborne Johnston, & Yaffe, 2005). A secondary analysis of the data from the Canadian Study on Health and Aging (Thomas & Rockwood, 2001) has also linked alcohol abuse to an increased incidence of cognitive impairment in older adults.

More recently, literature on dementia has begun to focus on the factors that might potentially prevent or delay dementia in the older adult population. Studies

have explored a wide variety of factors including the effect of exercise (Larson et al., 2006), diet (Morris, Evans, Tangney, Bienias, & Wilson, 2006), mental exercise (Gatz, 2005), and the hormone estrogen (Shumaker et al., 2004).

Investigations into prevention therapies are suggested as a hope to mitigate the tremendous impact cognitive impairment has on the older adult, the family, and health care support systems (Caselli, Beach, Yaari, & Reiman, 2006).

Higher education or a larger brain, or both, have been suggested as characteristics associated with masking or slowing the clinical presentation of cognitive impairment in older adults (Mortimer, Borenstein, Gosche, & Snowden, 2005). These characteristics, called ‘increased reserve capacity,’ have been shown to affect the ability to assess MCI using screening tools. As the early indication of MCI improves the access to treatment, reserve capacity may contribute to delays in accessing treatment until the dementia has progressed, thereby decreasing the treatment benefit to the client. Mortimer et al. recommended the development of biochemical markers as a screening tool to identify individuals at risk, because pathology precedes clinical presentation of dementia.

1.4.1.6 Prevalence of Dementia

Epidemiological studies that inform the prevalence of dementia have suggested that factors affecting the variability in the presentation of dementia include age, screening tool, type and degree of impaired cognition, and geographical location of the study (DSM-IV-TR, 2000). As stated previously, the prevalence of dementia in Canada has been strongly associated with increasing age (CSHA Working Group, 2000). Additionally, Manly and Espino (2004) reviewed studies that have investigated factors involved in cross-cultural identification of

dementia, and included variability in educational attainment as a factor in the prevalence of dementia among ethnic minorities. The number of years of education is often adjusted for in statistical analysis of screening data. Manly and Espino suggested that although the years of education can be accounted for in scores from screening, the quality of the years of education obtained also needs to be factored into screening for dementia. They advised that quality of education received by ethnic minorities could vary between ethnic groups, which further complicates comparison of cross-cultural findings.

Ukaintseva et al. (2006) investigated the present increasing rates of dementia in relation to the decreasing rates of mortality from stroke. Their analysis suggested that fatalities from stroke are decreasing with advances in health care. This decrease in fatalities increased the reporting of older adults with VaD, combined with an increased potential for clinicians to diagnosis dementia. Other authors have suggested that with increased survival rates from cerebral vascular accidents, and the associated increase in VaD or non-AD dementias, the current predictions about the growing numbers of older adults with dementia have been underestimated (Ross, Shah, Prodan, & Monnot, 2006).

Autopsy provides the only definitive assessment of the etiology of dementia (Manly & Espino, 2004). In the literature review by Manly and Espino, it was noted that the majority of autopsy studies included white subjects and a limited number of autopsy studies were focused on ethnic minorities. Manly and Espino suggested that the use of brain imaging might be useful for epidemiological investigations using ethnic populations as some ethnic groups more often refuse consent for autopsy.

Osuntokun et al. (1992) reviewed cross-cultural studies on the prevalence of AD and suggested that if environment and ethnicity play a role in the etiology of AD, then investigation of individuals who have migrated to different parts of the world might shed light on AD. The authors recommended that follow-up studies be done with ethnic groups for which low incidence rates have been reported including North American Indians (Kramer, 1996) and Africans (Hendrie et al., 1995). Although it has been suggested that prevalence of dementia differs between developed and developing countries (Hendrie et al., 2001) these differences might be attributable to environmental factors or differences in mortality (Hall et al., 1998; Ogunniyi et al., 2000), or the small number of studies that have been performed in undeveloped countries (Ferri et al., 2005). At present there is little evidence on which to make strong conclusions.

As previously stated, the study by Hendrie et al. (1993) is the only reported investigation concerning the prevalence of dementia in a northern Aboriginal population in Canada. The study compared rates of AD and other dementias within a group of older adults from two northern communities (n = 192) to a stratified random sample of age comparable older adults in an urban southern community (n = 241). The study concluded that AD might be a rare disease for the Cree in Manitoba. However, Hendrie et al. cautioned that the findings were not generalizable to the Native population in northern Manitoba and that prevalence rates for all dementias were found to be similar for the two samples (4.2%).

Population demographics have changed since the time of the study by Hendrie et al. (1993). Over a decade later, the older adult Aboriginal population in Canada has grown. Statistics Canada (2003a) reported that the population

percentage of elderly North American Indian and Inuit increased by 40 percent since 1996 (i.e., 3.5% in 1996 to 4.0% in 2001) and were reported to represent one of the fastest growing segments of these two populations. New census profiles on the age variation in the Canadian Aboriginal population will be available in 2008, and will be interesting to follow in relation to the need for dementia care in northern Canada. With an increasing population of northern older adults, the potential exists for an increasing need for dementia care in northern communities and concomitant examination of the clinical involvement of northern RNs in relation to the needs of northern older adults with dementia and their caregivers.

1.4.1.7 Cross-Cultural Perceptions of Dementia

Dementia holds different meanings for different cultures. Beiser (2003) identified that the Serer in Africa not only did not have a word representing dementia, but they did not think of it as a disease. Dementia was reported to be a natural occurrence whereby the elderly returned to a child like state prior to death and their reincarnation. A similar conceptualization of dementia was reported in an Australian Aboriginal population (Pollitt, 1997). Again, dementia was not perceived as a sickness, rather the elderly were stated as tiring or childlike. Madness was reported as a label applied to elders that exhibited aggressive behaviour in contrast to a sickness associated with more docile presentations with memory loss. Further, Pollitt's review of dementia in Aboriginal communities in Australia identifies that dementia has not been perceived as an abnormal condition in all cultures and that western concepts of dementia may not be found in indigenous cultures.

Cross-cultural perspectives on dementia were explored by Hendrie, Baiyewu, Eldermire, and Prince (1996) among samples from studies on dementia in Caribbean, Native American, Canadian, and Nigerian societies. The findings of this study by Hendrie et al. provide evidence that the early stage changes in behavior are often misinterpreted. The Jamaican experience, with persons experiencing early memory loss, was to relate disturbing behavior to “attention seeking” (Hendrie et al., p. 485). For the Nigerian sample, personality changes were stated as under reported, as a diagnosis of mental illness carried a strong negative stigma in this culture. Tolerance towards elderly displaying regressive behaviors was reported in Caribbean, Native American, and Nigerian study samples.

Folk definitions that oppose scientific concepts of dementia have also been found in western cultures. Gaines (1989) reported that African Americans viewed dementia as resulting from the lifetime impact of worry and stress. Henderson and Gutierrez-Myka (1992) stated that Hispanic Americans may identify dementia with madness, and that the madness of one member of the family reflects on the entire family. Braun and Browne (1998) found that some Asian people living in the Pacific islands related dementia to possession by spirits. Although these investigations regarding the cultural meaning of dementia provide insight into some ethnic and racial groups, the diversity of cultural groups in western countries suggests that there is much more to know regarding cultural interpretations of dementia (Dilworth-Anderson, & Gibson, 2002). Further, the effect of acculturation on the permanence of a cultural definition of dementia and increased incidence of illnesses, such as psychiatric disorders in Canadian Aboriginal

groups, immigrants and refugees, has been stated by Barry (1990) to be in need of exploration to develop policy and programming for health outcomes associated with acculturation.

Cultural studies exploring the perception of dementia from the perspective of the individual diagnosed with dementia are limited. Other than the associated decrease in cognition in advanced dementia that may preclude participation in research, the perspectives of adults with dementia reported include the experiences of early stage AD (MacQuarrie, 2005; Werezak & Stewart, 2002) as well as ethnographies on the lives of dementia sufferers in the later stages (Chatterji, 1998). The qualitative Canadian study by Werezak and Stewart (2002) identified that a diagnosis of dementia had the potential for individuals to feel as though they were perceived as no longer competent to assist in decision-making. MacQuarrie described early dementia as a paradox where the individual both accepts and resists their diagnosis. Chatterji (1998) provided an ethnographic study of dementia for one patient in a Dutch nursing home. The ethnography identified that the patient's diagnosis of Alzheimer's disease determined how his life and relationships were evaluated versus their life history, relationships with those significant to them, or the individuals the patient interacted with on a daily basis. The patient with AD was suggested to have "no voice", unable to communicate or develop relationships, and viewed as a diseased person and not a person experiencing a disease.

In summary, little is known about the interpretation of dementia by Canadian Aboriginal people in the north (Hendrie et al., 1993) or in other North American Aboriginal populations in the United States or Alaska (Jervis &

Manson, 2002). Further, the experience of community health professionals in the north with older adults who have dementia was not identified in the literature. What is important to the understanding of dementia in northern Aboriginal communities is that the knowledge and wisdom of elders is valued (Hendrie, et al., 1996). The Inuit have been reported to identify the role of elders in passing on knowledge to younger community members and that aging and decline are associated and viewed without strong negative associations (Collings, 2001). The northern Cree have been reported as placing value on the knowledge and wisdom of their elders and were considered tolerant of regressive behaviors in their elderly (Hendrie et al., 1996). Community member knowledge of older Aboriginal adults with dementia in northern Saskatchewan identified the challenges in accessing care for northern older adults (Cammer, 2006), which supports earlier findings that documented that family caregivers in small northern communities have limited access to respite and support services (Loos & Bowd, 1997). Cammer's thesis findings suggested that a limited amount of community knowledge about dementia was a contributing factor in the identification of older adults with dementia in northern communities.

As the perception of dementia in Aboriginal populations may well differ from western disease concepts, translating western scientific knowledge regarding this syndrome into Aboriginal health care may pose challenges for health researchers and health care providers. Reading and Nowgesic (2000) have reported that health programming and outcomes increased when academic knowledge is transferred to and relevant for Aboriginal communities. Smylie et al. (2003) stated that, "The theoretical and epistemological frameworks underlying Western

scientific and Indigenous knowledge systems have fundamental differences” (p. 142). Accordingly, investigating dementia in Aboriginal populations requires the creation of Aboriginal knowledge regarding dementia and attentiveness to the expressed needs of communities regarding dementia assessment, diagnosis, and care.

1.4.2 Dementia Care

Nurses from many practice areas encounter older adults with dementia as dementia care occurs in both community and institutional settings. The literature documents unique challenges in providing care in the community as well as in institutions and the issues involved for both RNs and informal or family caregivers. Sociocultural factors also affect the care of older adults in Canadian society and the perception of dementia.

1.4.2.1 Community Based Dementia Care

Individuals that experience dementia typically reside in their own homes in the community. Decline in cognitive functioning often results in increased dependence in activities associated with bathing, dressing and financial affairs, and decreased social interactions associated with depression (Plehn, Marcopulos, & McLain, 2004). Caring for individuals with dementia in the community has been described as challenging as deterioration in cognitive functioning progresses from assistance to 24-hour surveillance and may include the management of wandering, disruptive, and aggressive behaviors (Grunfeld, Glossop, McDowell, & Danbrook, 1997).

1.4.2.1.1 Informal caregivers. Community care of individuals with dementia involves both formal and informal caregivers. Typically, informal or

family members are initially the primary caregivers for older adults with dementia. Challenges faced by family caregivers include the burden of bearing witness to the cognitive and physical deterioration of a close family member, and the associated burden of providing increasing amounts of physical care (Grunfeld et al., 1997). The effects of ongoing caregiving for a spouse or parent with dementia has been reported to result in emotional and physical costs as families attempt to keep the individual with dementia at home as long as possible (Morgan, Semchuk, Stewart, & D'Arcy, 2002b). It is important to note that in rural Canada, women are the predominant caregivers for older adults who are in need of assistance (Crosato & Leipert, 2006) and have been more often found to suffer negative health effects from their caregiving roles, in part, related to the limited resources and supports available in rural areas (Bedard et al., 2004). In one northern Saskatchewan study 28.5% of community members over 15 years of age were found to assist in the care of older adults (Krieg, Martz, & McCallum, 2007).

1.4.2.1.2 Rural community-based services. Rural community-based services for dementia care have been reported as under utilized by family caregivers (Forbes & Jansen, 2004). Morgan et al. (2002b) explored reasons for the lack of use of formal community based dementia care services in rural Saskatchewan. These reasons included the stigma of mental illness attached to dementia and inappropriate behaviors displayed by the individual with dementia, limited degree of family privacy in the rural setting when dealing with health care providers associated with a perception of limits to the confidentiality in small communities, and the independent self-sufficient nature of rural people, whereby the families perceived homecare use as burdening the health care system, an

intrusion into their homes and the next step towards the need for institutionalization of their relative. This study by Morgan and colleagues also noted that the support group for family caregivers in the rural study setting no longer met because of decreased numbers of individuals attending.

1.4.2.1.3 Social support. The role that social support plays on the caregiver's coping ability when caring for a spouse with dementia at home was the focus of a study by Upton and Reed (2006). Findings of this study indicated that spouse's viewed the caregiving role as "their sole responsibility" (p. 1263). In doing so they tended to distance their families from: 1) developing knowledge about the level of care given to the spouse with dementia and 2) from assisting in delivering care. This stance towards the care of a spouse was stated to result in isolating the caregiver from social contact: while at the same time the caregiving spouses were becoming increasingly isolated from their partner with dementia as cognition became impaired. Although the isolation and level of care has been found to have negative effects on the caregiver, this study emphasized that the role of caregiver was perceived as important and that telephone and in-person contact with family members on a regular basis provided necessary support so that the caregiver did not perceive themselves as forgotten.

Social support has been conceptualized using the concept of social capital. There are many models of social capital found in this literature (van Kemenade, 2003). The literature defined social capital in relation to personal social networks that function to provide support and access to resources (Gilbert & van Kemenade, 2006). The context of the social capital model for older adults presented by Keating, Swindle, and Foster (2005) was comprised of personal, community, and

policy networks. This context for social capital provides a broad perspective from which to view the social capital of older adults with dementia and their caregivers.

The personal networks close to older adults are those that provide informal social, physical, emotional, and caregiving support needs for older adults. Keating, Otfinowski, Wenger, Fast, and Derksen (2003) classified these personal networks as: social (e.g., companionship), support (e.g., transportation), and caregiving (e.g., tasks associated with physical care and daily living). Personal networks are commonly composed of family members and friends. The size of a personal network and the care needs of an older adult were suggested as indicators that may determine the need for more formal supports in the community for older adults (i.e., home care), particularly for older adults with dementia and their caregivers.

Social capital, in the form of formal community networks for older adults with dementia and their caregivers include the resources in a community that promote the ability of older adults to be supported given the potential for assistance for independent living (Keating et al., 2005). Of interest to this study will be an exploration of the network of community support available to older adults with dementia, such as home care and LTC facilities. Relocation of patients to another community for care, related to a limited variety of health care resources within a small community, has been reported to affect a patient's personal social network. Previous studies on the relocation of Aboriginal dialysis clients from the north to southern health care facilities found that relocation affected an individual's social relationships (Salvalaggio, Kelly, & Minore, 2003). It could also be said that relocation decreases an individual's social capital.

The third area of social capital concerns policy networks (Keating et al., 2005). Policy networks involve the government funding and the value that is perceived by communities and governments in supporting programming for older adults. Although the focus on older adults in Aboriginal communities is growing as evident by the National Aboriginal Health Organization's emphasis on continuing to explore seniors' health issues, reported in the *Report on First Nations Seniors' Health and Wellbeing* (First Nations Centre at the National Aboriginal Health Organization [NAHO], 2006), at present policy in this area would appear in it's infancy. Present policy networks can be viewed as having the potential to develop with the expansion of home care services in the north and the desire of northern older adults to be cared for in their communities by their families (Van Liempt, 2006).

1.4.2.1.4 Community dwelling risks. An increasing proportion of older adults who are living alone in the community have become cause for concern in connection with the prevalence of dementia in the older adult population (Tierney et al., 2004). Gilmour (2003) explored the perception of risk in a study of adults with dementia in northern rural Ireland. Risks involved in living alone identified by family members, district nurses, physicians and social work staff "were heating and cooking, falling, getting lost and managing money" (p.23). Findings of the study reported that no major incidents were identified that caused harm to the older adults with dementia who lived alone. The author identified that living risk free was not a reality for individuals with or without dementia. The findings suggested that a stable rural community where people have known the older adult with dementia over a long period of time might offer lower risk for some types of

harm. However, Gilmour did recommend that increased specialized support for dementia in the rural setting was needed and should include a community support network to assist in the informal care and supervision of older adults in their communities.

The literature on designing environments for people with dementia has predominantly concerned indoor institutional settings versus outdoor environments (Mitchell & Burton, 2006). Mitchell and Burton identified that environmental changes to neighborhoods is beneficial in assisting older adults with dementia to live safer lives in the community. Familiarity with the landscape and legible neighborhood signs were found to assist in orienting individuals with dementia to negotiate safely returning home when they were able to enjoy walking outdoors.

1.4.2.1.5 Access to health care. An important concern for rural and remote people in Canada in maintaining older adults with dementia in their communities is access to appropriate health care services. Access to specialists is challenged by the geographic distance needed to travel to access specialized services (Romanow, 2002). The cost of travel to access services and the cost of home care have been identified as deterrents for using home care services in rural areas (Morgan et al., 2002b). Rural Canadians are reported to have lower levels of income than urban Canadians (Forbes & Jansen, 2004), which may account for lower usage of personal care assistance for relatives with dementia who are cared for at home. Decreased use of home care services may also be reflected in the larger informal support system reported by rural residents (Forbes & Jansen). On the other hand, rural family caregivers have reported a higher frequency of behavior problems displayed by the family member with dementia than urban caregivers, and a

greater need for informal support (Bedard et al., 2005). As behavioral issues have been reported to be a major reason for institutional placement of older adults with dementia (Hebert, Dubois, Wolfson, Chambers, & Cohen, 2001) exploration of barriers to home care services that promote behavioral management in rural and remote communities may assist in prolonging the ability of rural families to keep relatives with dementia in their homes and especially in communities without dementia care or LTC facilities.

1.4.2.2 Institution Based Dementia Care

The CSHA (Hebert et al., 2001) performed a longitudinal investigation on the factors associated with the need for institutional care of individuals with dementia. This study confirmed previous findings where the severity of cognitive impairment and caregiver burden resulted in institutional placement. Caregiver burden was found to more strongly correlate with behavioral problems than severity of impairment. The overall findings of the study suggested that the type and severity of dementia, the age and relationship of the caregiver to the care receiver, and the health status of the caregiver and degree of burden determined institutionalization.

1.4.2.2.1 Facilities. Institutional dementia care is provided in long term care (LTC) facilities, with or without special dementia care units (SCUs). The use of SCUs for the care of individuals with dementia has been examined in relation to best practices in dementia care. Chappell and Reid (2000) reported that SCUs (based on measured outcomes on behavior problems, activities of daily living, mood, cognitive functioning, staff training, use of restraints, care routines, and environment design) were not providing significantly better care than non-SCUs.

The findings of this study suggested that many elements are necessary to achieve best practices and that although some units were doing well implementing improvements to caregiving practices a limited number of units were addressing all dimensions of care for residents with dementia. Smaller facilities were reported to experience less deterioration in residents with dementia.

1.4.2.2.2 Behavioral problems. The behavioral problems that are found to be unmanageable in the home setting leading to long-term care admission commonly need to be managed in an institutional environment. Middleton, Stewart, and Richardson (1999) compared levels of stress experienced by staff in response to disruptive behaviors on traditional LTC units and SCU's. Caregiving staff in SCU's were found to accept physical and verbal threats as an expected consequence of the work with residents who have dementia. SCU staff perceived the abuse as a result of the resident's disease process rather than as a personal threat. Staff training specific to dementia care has been suggested as involving a holistic versus task-oriented approach to care (Kovach & Krejci, 1998) with activities such as bathing that are known to elicit aggressive resident behaviors (Rasin & Barrick, 2004). Formal caregivers who focus on understanding the meaning behind the problematic behaviors of a resident with dementia and develop behavior management and assessment skills could assist in reducing problem behaviors more than staff who respond in a custodial fashion (Kovach, Kelber, Simpson, & Wells, 2006; Skovdahl, Kihlgren, & Kihlgren, 2003).

1.4.2.2.3 Dementia education. Education for formal caregivers on dementia care has the potential to decrease the effect of stressors experienced in LTC (Morgan et al., 2002a). Morgan et al. examined job strain in rural nursing

home staff. Findings from focus groups indicated three major themes related to job strain: workload, insufficient skills, and integration of residents with dementia with other LTC residents. The participants in this study identified that education related to the care needs of the residents with dementia helped to decrease their perception of stress in the work environment and to increase their level of confidence in dealing with this resident group. Further, the findings indicated the perceived usefulness of separate dementia care units in providing specialty services to residents with dementia and focused educational programs for the staff.

Information regarding stressors and the effect of variables to decrease stress for informal caregivers has been explored. Almberg, Grafstrom, and Winblad (1997) reported that burnout and burden experienced by a spouse or relatives involved in caregiving were similar whether the patient was at home or in an institution. Pearlin, Mullan, Semple, and Skaff (1990) presented a model of caregiving and stress that identified the cognitive ability and dementia progression as elements in the experience of stress. For family members and the individual with dementia, the fear of the unknown and the stigma related to dementia diagnosis are very real experiences that can benefit from supportive education (Werezak & Stewart, 2002).

1.4.2.3 Sociocultural Factors in Dementia Care

In light of the projected statistics about the prevalence of dementia, an exploration of sociocultural factors is important. Some of the factors that have been associated with the identification and care of older adults with dementia include the western cultural values of independence and vitality, the changing family unit and the concept of aging in place. Exploration of cultural values assists

to provide a context for the perception that the increasing aging population, and the increasing number of older adults with dementia, will be an economic burden to society (Chappell et al., 2003).

1.4.2.3.1 Independence. The dominant cultural value of independence implies a negative view of the social and physical dependence that may result from aging and dementia. As cognitive ability deteriorates with dementia, dependence on others for personal care and safety increases. The concern of some individuals with dementia was that they would become a burden to family and friends (Werezak & Stewart, 2000). Therefore, the diagnosis of dementia can be seen to have a strong associated stigma in Canadian culture with implied hardships for the individual and their caregivers.

A diagnosis of dementia has an associated stigma for the elderly denoting a loss of competence and limitations in independence (Turvey et al., 2000), compounded by the western cultural stigma of decreased contribution to society associated with aging (Chappell et al., 2003). A poignant example of the fear associated with the diagnosis of dementia in western cultures is reported by Ikels (1998): “a woman in her mid-50s, who on learning she had probable Alzheimer’s disease, chose to become Dr. Jack Kevorkian’s first instance of physician-assisted suicide even though she was otherwise healthy” (p. 257).

1.4.2.3.2 Family unit. There is a wealth of health care literature on caregivers of the cognitively impaired elderly and those suffering from AD from developed nations. The literature on caring for individuals with dementia uses terminology such as “caregiver burden” and “caregiver burnout”. These terms can be seen as supporting the assumption that cognitive decline is associated with

burden and hardship not only for family caregivers but also professional caregivers in institutions. Keeting et al. (1999) examined the Canadian General Social Survey and reported that over 80% of caregivers found positive aspects to caregiving such as the ability to reciprocate for care given to them over their lifetime.

Connell and Gibson (1997) reviewed dementia caregiving studies that looked at race, culture, and ethnic differences among caregivers since 1985. The analysis of these studies found that non-White caregivers were more likely to be an adult child, friend, or relative, whereas White caregivers were more often a spouse. Non-White caregivers were also found to have lower levels of reported stress, burden, and depression, and stronger beliefs about filial support than White caregivers. Conclusions drawn from this analysis included the view that caregiving constructs, like burden or stress, may be defined by race, ethnicity, or culture.

Gallagher-Thompson (2006) stated that when caring for older adults with dementia, ethnic minority family's perception of their responsibility for caregiving is an important factor to be considered in the assessment, diagnosis, and care planning for the older adult. The concept of *filial piety*, the responsibility to care for family elders, is common to many cultural groups. In assisting the family caring for an older adult with dementia, family responsibilities need to be explored to be able to offer services and support in a manner that is appropriate to the family system. Gallagher-Thompson identified some concerns that professionals need to be aware of when interacting with ethnic minorities such as: the limited reporting of caregiver distress, underreporting of behavior and memory problems, and the potential for higher levels of family conflict with the higher numbers of family caregivers.

The Statistics Canada (2002) profile on Canadian families reported that nuclear family arrangements were on the decline. More seniors were found to be living alone outside of institutions than in previous years. The projected increase in the prevalence of dementia, and the associated aging of the baby-boomer generation, have been reported as a concern given the changes in the nuclear family affecting the ability to provide care for aging adults with dementia. However, it has been suggested that the changes in family structure and migration of family members from their communities of origin may not adversely affect the care of older adult relatives within the increased levels of resources and modes of communication (Chappell et al., 2003).

Statistics Canada (2007a) predicts that the overall younger population in Canada (under 14 years of age) might be outnumbered by the older population in the next 10 years. This growing cohort of older adults in Canadian society has become cause for concern with respect to the informal family care for the older adults as their health status declines. Much of the care for older adults is provided by informal caregivers within the community, and support for these caregivers has been suggested as in need of further development (Keating et al., 2003).

In contrast to the general Canadian demographic characteristics, the Aboriginal population projections have a quite different presentation. For Aboriginal people the younger age group remains the largest segment of this population, although the older adult population has been slowly increasing (Statistics Canada, 2003a). Concerns that have been identified in the older adult population of Aboriginal people surround the high proportion of older adults with chronic conditions and the use of a First Nations language as the language of

communication (Statistics Canada, 2007). The language of communication has been stated to pose a barrier for interaction between the older and younger generations, which would also understandably affect the ability to communicate for the purpose of caregiving. The statistical picture of older Aboriginal adults does identify a positive aspect for caregiving, where a large proportion of older adults perceived their level of social support as high, and a large proportion of older adults were reported as living with family versus living alone.

Chappell et al. (2003) defined aging in place as the desire for older adults to stay in their own homes. The propensity for elders to want to age in their own homes was stated as related to an attachment to their belongings and care for their surroundings. Chappell and colleagues note that there has been an increase in assisted living arrangements where older adults who are experiencing failing health are able to remain in a housing environment where they can bring their belongings, has been a benefit to many older adults with health challenges. What is not known is how many of these assisted living arrangements might be available in northern Canada.

In summary, dementia is a syndrome that, dependent on the neuropathology, has numerous subtypes. Assessment, diagnosis, and caregiving of an older adult with dementia involve the exploration of many variables the most notable are the cultural or ethnic considerations that need to be integrated into the assessment and caregiving processes. Further, the sociocultural changes in nuclear family arrangements, although potentially managed well with families arranged over distances, does pose challenges for the care for older adults with dementia attempting to be maintained in familiar surroundings.

1.4.3 Health Care in Northern Canada

The delivery of health care in northern Canada has many obvious challenges (Kirby, 2002; Nagarajan, 2004; Romanow, 2002). These challenges include: the large distances between communities and advanced health care services, limitations in the amount and levels of services that are provided, and difficulties in recruitment and retention of health care personnel. Further, the majority of the population in northern Canada is of Aboriginal descent; therefore, concerns about the delivery of health care in northern communities also focuses on Aboriginal health care issues and concerns.

This review of literature pertaining to health care in northern Canada used both Federal and Provincial reports, and nursing literature to explore health care services with a focus on the older adult. As there are a limited number of sources from which to draw information regarding dementia care in northern communities, rural dementia care literature is included as it provides information that may illuminate northern dementia care issues and concerns. In both rural and remote communities there are similar challenges with geographical distance to advanced services and issues of recruitment and retention of nurses and other health care professionals. Further, although there is little empirical literature that focuses on nursing practice in northern Canada, and even less focused on the care of older adults with dementia in this setting, reviewing the existing literature on health care in northern communities assists to highlight areas of concern related to the health services for older adults.

1.4.3.1 National Health Indicators and the Northern Older Adult

All of the Canadian provinces and territories have begun to collect data on health indicators as a method of assessing the system of health care delivery across the country. Data collection for these reports has limitations as recording systems have yet to be developed in all jurisdictions and national data excludes populations on reservations and remote areas (Health Canada, 2004a). The most current national health indicators report (Health Canada, 2006) identified that the data used to present findings on the Canadian First Nations population was from the First Nations Regional Longitudinal Health Survey (RHS, 2002 – 2003) and Inuit data was obtained from the 2001 Aboriginal Peoples Survey (NAHO, 2004). Comprehensiveness of the data collection for these surveys was challenged since Quebec was not represented in the national picture of First Nations or Inuit health.

1.4.3.1.1 Northwest Territories/Yukon/Nunavut. Reviewing the results of the health indicators reports for Nunavut, NWT, Yukon and Northern Saskatchewan provides insight into the general services, service providers, and issues for Aboriginal older adults in northern communities. In Nunavut (Government of Nunavut, 2004a) primary care was reported as provided most often by Community Health Nurses (CHNs) in Nursing Stations or Community Health Centers. Of the participants in the survey in Nunavut, approximately 80% reported that initial assessment and diagnosis of illness was provided by a CHN, and over 90% reported being satisfied with the care they received in their communities. The CHN provided chronic disease care and follow-up including counseling and management within the community and support for patients and families. Assisted living facilities in Nunavut are identified as limited but, home

making services were stated as available to seniors so that they could stay within their home community.

In the NWT, community based services were reported as the primary means of acquiring health care services (NWT Health and Social Services, 2004a). The government of the NWT provides “A profile of NWT Seniors” (NWT Health and Social Services, 2003) that indicated services for seniors include home care services and potential expansion of the 166 long term care beds that are currently available. Again, seniors were indicated as the fastest growing population among NWT residents. In contrast, the Yukon indicators report had limited information on their senior population (Government of the Yukon, 2004a), although the government of the Yukon website indicated that three long term care facilities exist for care, of which one had a special care unit for dementia (Government of the Yukon, 2004b). Of the population responding to the survey in the Yukon and NWT approximately 85% stated they were satisfied or very satisfied with community-based care they were receiving.

1.4.3.1.2 Saskatchewan. For the Province of Saskatchewan, the health indicators report was prepared as a provincial summary (Saskatchewan Health, 2004). As with the national report this report excluded Aboriginal people living on reserves, individuals in the armed forces, and in correctional facilities. A limited focus on the health of older adults in Saskatchewan was included in this report although references to information for seniors were provided. Information presented on home care (provided by RNs and other caregivers) stated that over half of the clients were over the age of 75 years. Statistical data on the geography of home care users were not included although access in rural and remote areas

was stated as affected by financial and organizational difficulties. The report acknowledged geography and culture as contributing factors that affect the health of Saskatchewan residents. People living in the north were identified as having difficulties accessing services. Further, cultural loss of language and tradition were reported as contributing factors for life and health expectancies for both Aboriginal and immigrant people in the province.

The health authorities in the three northern Saskatchewan regions that are of interest to this study (Athabasca, Keewatin Yatthe, and Mamawetan Churchill River) have compiled a health indicators report that included national indicators and other descriptive indicators relevant to the population in the northern portion of the province (Irvine & Stockdale, 2004). This report documents that these three regions geographically represent 46% of the land area of the province and are home to 3.4% of the provincial population, of which 83.5% identified themselves as Aboriginal. These statistics suggest that the provincial indicators report is more representative of the southern portion of the province as the northern data in the provincial report excludes First Nations People living on reserves.

The northern Saskatchewan health indicators report (Irvine & Stockdale, 2004) stated that hospitalization rates in the north were higher than the provincial average and the highest rates occurred in northern people over the age of 75 years. Causes of mortality for northern and southern Saskatchewan residents differed with a lower percentage of mortality from circulatory disease and cancer reported in the north, although mortality rates for people over the age of 65 years of age are reported as similar between the north and the south. Although these statistics provide some information on older adults in the north, much remains to be

investigated to describe the health of northern older adults and their health services needs both provincially and nationally.

All of the health indicator reports indicated diabetes and vascular disease, which are risk factors for vascular dementia, as major health issues in the north. No reference was made to cognitive impairment in aging. Although these regional and national reports provide insight into the existing services available to older adults, the statistical information has a limited ability to describe health care challenges of the older Aboriginal adult. Only the northern Saskatchewan report (Irvine & Stockdale, 2004) included a reference to dementia, although stated in a general comment on mental health issues and not suggested as an issue in the mental health of older adults in the north or a contributing factor in the decline in daily functional abilities of older northern residents.

1.4.3.1.3 Aboriginal Health Surveys. The First Nations Centre at the National Aboriginal Health Organization (NAHO, 2004) combined results of the national and regional Aboriginal health surveys reports from 1997. As Aboriginal people living on reserves have been omitted from national health surveys, the First Nations Centre report provides a valuable synthesis of on-reserve health issues. The authors document that the health of older adults in Aboriginal populations has received a limited amount of attention. Older Aboriginal adults, defined as adults over the age of 45 years, were reported to experience levels of chronic illness higher than the national average. Physical limitations associated with chronic illness were reported to have resulted in activity limitations for one in eight older adults on reserve, leaving them house bound.

NAHO (2006) compiled a *Report on First Nations Seniors' Health and*

Wellbeing that summarized the findings from the national data specific to adults 55 years and older. This document identifies that 16% of the on-reserve population was 55 years or older. Of the older adults 41.0% reported their health as fair to poor, 48.8% reported having a disability, and 85.2% reported having one or more chronic conditions. Other notable findings from this report include the high percentage of older adults that understand (70.5%) or speak (67.0%) a First Nations language in comparison to younger adults (18 to 54 years old at 46.2% and 39.4% respectively).

According to the document, *A statistical profile on the health of First Nations in Canada* (Health Canada, 2005), population demographics for Aboriginal people differ from the national picture in that the 61.1% of the First Nations population on-reserve in the year 2000 was under 30 years versus 38.8% nationally (p. 16). Demographic data identified 57.9% of the population under the age of 15 years (28.0% nationally) and 6.4% were over 65 years (18.2% nationally). The survey collected data about the ease of access to health care personnel that identified access to specialty services and dentistry as difficult. Difficulties reported in gaining access to services increases as communities become more isolated: 17.7% of Registered Indian people on reserve were reported to have no road access to hospital services. Housing on reserve is a dominant issue as poor standards and over crowding impact on the physical and mental health of First Nations peoples. Impacting the health of this population is also the environmental contaminants (mercury, PCB) that have been detected in the body at unacceptable levels.

Health concerns, which are more prevalent in reserve communities included diabetes, tuberculosis, chronic diseases (arthritis, heart disease, and hypertension), suicide, substance abuse, and sexual/physical/emotional abuse (Health Canada, 2005). Of interest to the present study on dementia was the prevalence of diabetes, hypertension and cardiovascular disease in the Aboriginal population and the associated relationship between these conditions and dementia (Contentino et al., 2004), which suggests a likelihood of dementia to have an affect in this population in the future.

The above issues of access to services, health concerns, and housing are all echoed in a study by Krieg, Martz, and McCallum (2007) who looked at health services access for elderly northern Métis women. This project, situated in Buffalo Narrow, Saskatchewan, found that many of the services available in southern communities that assist older adults to stay in their homes, such as home assistance and transportation, were not offered in this northern community. Compounding these challenges for the health status for older northern Métis women were concerns about the turnover of health care professionals that created gaps in services and difficulties in the continuity of health education.

Overall, these national reports provide little information on the health of northern older adults. NAHO (2006) addresses the limitation in their data on older adults and aims to increase the information on this population of First Nations people. However, at present there are limited sources from which to draw detailed information. Given the increase in numbers of older adults in Canada as a whole, exploring the health of older adults through the collection of national indicators, including the health issues of the older adult segment of the population and First

Nations people on reserves, would provide a more comprehensive view on the health of Canadians.

1.4.4 Northern Nursing

Similar to the state of knowledge about northern older adults, there also is a paucity of literature on Canadian northern nursing practice. The literature reviewed on rural and remote nursing primarily identified broad issues and concerns encountered in northern nursing practice settings such as practice roles of the RN (MacLeod et al., 1998; Tarlier et al., 2003; Stewart et al., 2005; Vukic & Keddy, 2002), issues related to recruitment and retention (Minore et al., 2004; Minore et al., 2005), and continuing education (Kosteniuk et al. 2006; Kulig et al., 2006; Silverman et al., 2001; Tilleczek et al., 2005). The existing body of rural and remote nursing practice research has been conducted using primarily quantitative methods (Leipert & Ruetter, 1998) although there has recently been an increase in qualitative research exploring the work life of RNs in rural and remote nursing practice (Tarlier et al., 2003, Vukic & Keddy). These studies identify the necessity for further inquiry and provide validation of the specialized ‘generalist’ nursing practice role of rural and remote nurses (Leipert & Ruetter; MacLeod, 1998; Tarlier et al., Vukic & Keddy). Both quantitative and qualitative studies in the literature document the expansive knowledge base necessary to work in rural and remote regions, the heavy workloads, and difficulties in accessing continuing educational programs because of the large geographic distances from educational resources.

Most of the Canadian literature that describes the context of northern nursing is found in historical (Dodd, Elliott, & Rousseau, 2005; Meijer Dress &

McBain, 2001) and autobiographical writings of nurses (Canitz, 1991; Edwards, 1996; Scott & Kieser, 2002; Scott & Kieser, 2005). Canadian nurse researchers have conducted a limited number of investigations into northern nursing practice. Martin (1997) identified an early study, by Gregory (1987), which explored the relationship between northern community elders/traditional medicine and nurses. Findings from this study suggested that northern nurses had limited interaction with elders in their communities and were not found to incorporate referral to the elders or support traditional medicine practices when providing care. Reasons given for the limited collaboration were the limited cultural orientation given to nurses and the need for nurses to approach elders for assistance in conjunction with the local Community Health Representatives (CHRs).

1.4.4.1 Themes in the Literature

Vukic (1997) provides a comprehensive review of the literature surrounding northern nursing classifying the literature into five themes: “the expanded role, the cultural context, northern nursing within a broader health care context of northern health services, the changing role of northern nurses with the development of primary health care and worklife issues of the outpost nurse” (p. 39 – 40). Although this literature review is now 10 years old, the themes are still relevant. This review will use the themes from Vukic’s review and build on it using the literature published post 1997.

1.4.4.1.1 Expanded role. Vukic (1997) stated that the expanded role of the nurse was typically the theme most often encountered in the literature on northern nursing. Indeed, almost all authors identify this role of the nurse as functioning outside of the traditional nursing skills (Tarlier et al., 2003, Vukic & Keddy,

2002). Sometimes referred to as a physician replacement, the northern RN's role in health care is commonly described as primarily centered around acute or emergency care and secondly performing public health functions.

In a recent survey on the learning needs of nurses working in First Nations communities, emergency and acute care learning opportunities were a priority for the nurses (Silverman et al., 2001). The study also identified health assessment, mental health, and prenatal and postnatal care as other areas that the nurses would like to increase their skills. However, of concern for northern health care delivery is the identification of acute and emergency skills as a priority as the importance of these areas of practice continues to support the characterization of outpost nursing as an extended role and does not acknowledge the other supportive nursing roles, such as home care, in remote communities.

1.4.4.1.2 Cultural context. The second theme of cultural context relates to the situation where most of the health care professionals in the north are not of Aboriginal descent and have a limited understanding of Aboriginal culture (Vukic, 1997). A cultural understanding and an awareness of the community served by health care professionals has been included in policy drafted for health professionals working with Aboriginal people in health care settings (Smylie, 2000). Recommendations of this policy draft also outline the need for health care professionals to be cognizant of the historical context of health care issues in relation to Aboriginal people. The policy recommendations build from the Report of the Royal Commission on Aboriginal People (RCAP, 1996) where strategies for improving health included: control of the health of Aboriginal people by Aboriginal people, a holistic perspective on health, development of services that

provide for Aboriginal culture, and equality in Aboriginal health with other Canadians.

In the literature reviewed for the present project a document by Health Canada (1998), *Reaching out: A guide to communicating with Aboriginal seniors*, presented the special needs of Aboriginal seniors, which enable them to access health program information. The three most prominent methods that Aboriginal seniors identified as ways they accessed information were: 1) word of mouth commonly through communication with family members, 2) local community radio broadcasting, and 3) newsletters if the senior had a working knowledge of the English or French language. This document notes that the use of ‘community helpers’ and ‘local contacts’ to disseminate information to seniors, using the preferred modes of communication, involved building interprofessional relationships with the community helpers and contacts to increase their knowledge on topics. Further, the community helpers and health care professionals also needed to build relationships with the seniors in order to disseminate health information.

A historical document from the Saskatchewan Department of Public Health (1980) reported on nurses’ accounts during the creation of provincial outpost hospitals in northern Saskatchewan from 1929 to 1972. Early in the creation of northern nursing services, clinics had yet to be built and the nurses functioned by either visiting the homes of their clients or taking care of their clients in the nurse’s residence. When health care facilities were built in communities the nurses then found they were more apt to be serving the community from the facility and unable to provide services in the client’s home. Although the new facilities were

welcomed by nurses in these remote communities, the correspondence from the nurses suggested that the creation of these facilities was a mixed blessing as “home visits had helped her to get to know the people and to see how they lived” (Saskatchewan Department of Public Health, p. 34).

This documentation of the nurses’ service to northern Saskatchewan communities (Saskatchewan Department of Public Health, 1980) included reports of the nurses working with local community people. Local community members were hired to assist in the clinics, communicate with the community members in the language of the community, and in the building of the health care facilities. Growing from this partnership was the creation of the Community Health Representative (CHR) Program in 1960s (Waldram, Herring, & Young, 2006). Initially, the program began as a way to support the nurses working in northern communities. However, the program has enlarged to include health education and the provision of clinical services in communities without nurses. The National Indian and Inuit Community Health Representative Organization (NIICHRO) was formed in 1992 (Waldram et al.). Presently, NIICHRO has recently initiated a process for standardizing the training of CHRs identifying CHR competencies and career paths (NIICHRO, 2006). As CHRs are the vital community connection between non-Aboriginal northern health care providers and the communities, the creation of standardized training will assist to direct and develop their roles in Aboriginal community health programming.

Although nurses have worked along side CHRs and lay members of the community, in the delivery of health care in northern communities, there have been many challenges in the cultural interplay between non-Aboriginal

professionals and the people of the community. In an examination of the correspondence between nurses and their provincial southern supervisors in Saskatchewan between the 1930s and 1950s, Meijer Drees and McBain (2001) found that both the language barrier and the perception of the culture by the nurse influenced their interactions and opinions of the Aboriginal people with whom they worked. Although not all interactions were found to hold a negative context, such as nurses feeling that they had superior knowledge in health practices, the language and customs of the community were not introduced to the nurse in a manner that enabled the nurses to develop an understanding of the people, their language and their history.

The cultural knowledge gained through the work of the northern nurses in relation to First Nations communities and older adults is a gap that still exists in the literature. An important aspect in the provision of care for older cognitively impaired northern Aboriginal adults is that “there may be a tendency to use inappropriate urban models of care” (Innes, Blackstock, Mason, Smith, & Cox, 2005, p. 363). Indeed, the literature highlights that health care professionals need to adapt their work routines by partnering with CHRs and local contacts in the community to access older northern adults in a culturally appropriate manner. The need for cultural training of health care professionals to enable them to incorporate appropriate programming to reach older adults has been identified as necessary so that health services can be delivered more effectively to this population. Communicating in a first Nations language would increase the effectiveness of nurses when delivering health education, as would increasing the number of Aboriginal health care practitioners in northern communities. As one RN who was

quoted in a recent rural and remote Canadian survey stated, “Pride to work for your own people and speak the same language . . . easier for the elders, who are more appreciative.” (Kulig et al., 2006, p. 18).

1.4.4.1.3 Health care context and changing role of the nurse. The third and fourth themes that Vukic (1997) used to describe northern nursing literature were “northern nursing within a broader health care context of northern health services, and the changing role of northern nurses with the development of primary health care” (p. 39 – 40). The theme related to the context of northern health services describes nursing as providing a supportive role in the identification of health concerns of northern older adults. RCAP (1996) identified that current methods of providing health care to Aboriginal people have not increased the level of health of this segment of the Canadian population. Vukic’s literature review suggested that although nurses have been the primary health care providers in northern settings, it is not known how nurses address “inequities and social concerns in the North” (p. 45). This remains an unknown in current nursing and health care literature, particularly with respect to older adults, as confirmed through the NAHO (2006) compiled *Report on First Nations Seniors’ Health and Wellbeing*.

The use of a primary health care (PHC) model to deliver health services to urban, rural and remote communities in Saskatchewan is presently moving forward. The term, PHC, refers to a philosophy of care where the overall aim is to increase the health status of people and communities on a basic level through the delivery of services, education and health promotion/policy that is appropriate for health and addresses the determinants of health (WHO, 1978). PHC involves

health professionals working together with communities to promote healthy environments, provide health education and policy, integrate technology, and support positive choices for the health of a community.

Saskatchewan Health (2002) defined primary care provided in a primary health care setting as:

Primary care refers to a focus on care provided to individuals to address a particular problem or basic everyday health need. It is the care provided at the first level of contact with the health system – where people first enter the health system and where all health services are mobilized and co-ordinated. It includes education and activities to maintain health, as well as care for common illness, minor injury, and management of ongoing problems. (p. 1)

Primary health care includes the provision of primary care as defined above, but also addresses the social determinants of health. “Social determinants of health are the economic and social conditions that influence the health of individuals, communities, and jurisdictions as a whole. . . . Social determinants of health are about the quantity and quality of a variety of resources that a society makes available to its members” (Raphael, 2004, p. 1). Therefore, PHC is driven to affect both individual and community health concerns.

The Saskatchewan Health (2002) document identified that PHC clinics are in operation in the province, although does not identify northern health care centres as PHC settings. In reality, the northern health care centres can be viewed as organized on a PHC model since the inception of outpost nursing care. However, most communities can be found to have a limited number of health care resources available to both community members and health professionals and a limited amount of integration in the types of professionals at the point of care (e.g., physiotherapists).

Although the focus of PHC includes acute or emergency care, when communities are served by a small number of health care professionals the ability to address other PHC functions, such as health promotion activities and community collaboration, becomes challenging. Much of the literature reflects the ongoing association with the role of the northern nurse as a physician replacement, or nurse practitioner, with a focus on acute or emergent care services (Gregory, 1987; Tarlier et al., 2003). However, Tarlier et al. found that experienced outpost nurses had “a broader understanding of the role” (p. 183) of a community health nurse and viewed building relationships with community members as necessary for outpost nursing practice.

In some rural setting it has been suggested that as the size of the community decreases, so too does the number and type of allied health care professionals that assist rural nurses in providing health care services (Hegney, McCarthy, & Peason, 1999). When nurses become the only health professional in small communities the scope of nursing practice increases and becomes focused on acute care services provided from a health care facility. This arrangement, where the nurse provides community health care services primarily from the clinical facility, has been seen as a continuing challenge for the delivery of community-based health services such as public health in Nunavut (Roberts & Gerber, 2003). Facility-based interaction between nurses and the members of a small community, especially the older adults who tend to stay at home, may well decrease the nurses ability to interact with older adults and acquire cultural knowledge that would assist in providing health care to an Aboriginal community.

1.4.4.1.4 Worklife issues. Worklife issues of the northern nurse was Vukic's (1997) final theme. The literature reviewed included discussion about: the recruitment and retention challenges in isolated communities, the outpost clinic equated to a "total institution" environment as nurses live and work under the same roof, the ongoing extended hours of work and limited resources particularly in the areas of community health program and mental health (Canitz, 1991; Gregory, 1987). More recent contributions to this literature include studies that describe relationship building as a key component of outpost nursing (Tarlier et al., 2003), the work satisfaction of nurses who are working alone (Andrews et al., 2005), and the challenges involved in continuing education for rural and remote nurses (Kosteniuk et al., 2006; Kulig et al., 2006; Silverman et al., 2001; Tilleczek et al., 2005).

In September 2000, the Aboriginal Nurses Association of Canada (ANAC) published a report on the recruitment and retention issues of northern nurses. The sample consisted of 81% of the northern nursing workforce at that time, and a small percentage of former northern nurses who had worked in northern First Nations communities. The participants were employed by First Nations and Inuit Health Branch (FNIHB), Health Canada, and First Nation Health Authorities. The demographic characteristics of the sample were: 41% over the age of 45 years, 1% under the age of 25 years; 39% had a nursing degree compared to the then national average of 12%, 28% were Aboriginal, 10% were male, 46% were single, 56% had no children or grown children, and 43% had been in their present community less than one year. Other findings in the report were that only 60% of the nurses felt that their work site was fully staffed. The report documented the

characteristics of nurses who stay over five years in the north as: Aboriginal, from the north or from a small southern community, and having a significant other residing with them.

Vukic's (1997) used the term "total institution" to refer to the living situation of northern nurses. This term refers to Goffman's (1961) work in institutions. Total institutions are characterized by the distinction of two groups in a society where "a basic split between a large managed group [the community] and a small supervisory staff [the nurses]", with social interactions between these two groups as "typically great and often formally prescribed "(Goffman, p. 7). According to Goffman, the institution becomes all encompassing of work and play. For northern nurses, the small clinics in unfamiliar communities can be seen as a total institution as 16 hours of most work days is spent "on call" (i.e., from 5 pm to 8 am the next day): a practice that has been reported as physically, mentally and emotionally taxing, and increasingly stressful when predictable breaks are not provided (ANAC, 2000).

In 1991, Scott identified "Not many nurses studied to be X-ray technicians, plumbers, furnace repairers, social workers, grief counselors and environmental health officers. For northern nurses, all of these skills may be required in the course of a normal work day" (p. 20). This collage of professional skills and trades person abilities appear to be enduring as it is voiced in both past and present literature on northern and outpost nursing practice.

In the Nursing Stress Pilot Project (1994) Kirwan reported on the frequency and effect of critical incidences experienced by northern nurses and the resultant effect on nurses' mental health. Of the nurses surveyed 33% were

identified as showing symptoms associated with post-traumatic stress. Although the accuracy of the survey results for diagnostic purposes are questionable, incidents that caused stress included work experiences involving the death of a child, violence towards the nurses, or suicide attempts. The recommendations from the study were that nurses should not work alone in a community, and that security, training, and suitable equipment be available to northern nurses.

According to the ANAC (2000), the three main reasons for leaving a northern position were stress from excess workloads, lack of supportive management, and family issues. Further, violence and an unsupportive community were an impetus for job termination. Retention characteristics included a perceived positive attitude of the community towards the nurses, good relationships with community members, community political system support, and supportive community of health workers and sufficient health programs. Finally, the report indicated that the employer who is supportive of the nurse regarding expectations of work hours, adequate housing, and educational opportunities were more likely to retain nurses.

Vukic's (1997) five themes provide an organized description of the northern nursing literature and assist readers to become acquainted with the practice of northern nursing. There are limitations in the breadth of literature on this unique area of nursing practice as the literature focuses on the challenges surrounding northern nursing and provides little documentation about the positive changes that have developed in northern health care. One of the most notable changes has been the development of home care programs in northern communities.

1.4.4.2 Northern Home Care

The limited ability to address the community and home care needs in northern and reserve communities throughout Canada supported the creation of the First Nations and Inuit Home and Community Care Program, which received federal funding in 1999 (Health Canada, 2004b). Since the inception of this new program, 99% of Saskatchewan First Nations reserves now offer “referral, assessment and planned care” (Health Canada, p. 29). Although not all reserve communities have a full-time home care nurse, home care services are available on a consultation basis. One challenge for the program in Saskatchewan has been the high turnover of nurses in the northern communities. Difficulties with the retention of nurses and other staff in northern Saskatchewan home care programs have been reported in the Saskatchewan Health Home Care Program Review (Saskatchewan Health Community Care Branch, 2006). Additionally, this report highlighted that the provincial and federal home care programs are structured differently posing challenges in the continuity in services in the north between on and off-reserve clients.

The use of home care by older adults with dementia has been identified in reports in the Northwest Territories (NWT) and Nunavut. In Nunavut (Government of Nunavut Department of Health and Social Services, 2004b), the Home Care program provided a total of 270 hours of services to 3 clients diagnosed with dementia: 70 of the hours of care (25.9%) were provided by nurses. In the NWT there is a recognized need for more LTC beds and a dementia care unit.

1.4.4.3 Dementia Care and the Northern Nurse

Although nurses have a long history of providing services to people residing in northern Canada (Waldram et al., 2006) generally little research has been done that explores the practice role of northern nurses with respect to interactions with older adults (Gregory, 1987; Ritchie, 2003). We know that northern nurses interact with individuals in both the clinical environment and in social situations, which enables a unique professional perspective for the assessment of dementia in northern settings. Still the prevalence of dementia in northern Canada is relatively unknown, as is the way that older adults of Aboriginal ancestry present their concerns regarding memory problems to clinicians. Therefore, memory problems in northern older adults at present remains associated with known behavioral, cognitive and physical measures that may not be culturally relevant when used by northern nurses in assessing cognition in consultation with specialists, family, and community members.

Hendrie et al. (1996) presented findings regarding upsetting behaviors experienced by caregivers of older Cree adults with dementia. The most troublesome behaviors reported were agitation, wandering, violence, and delusions or hallucinations. A limited need for medical management of symptoms using pharmacotherapy was related to the tolerant attitude of the caregivers for the behaviors displayed by the elderly. Hendrie et al. concluded that the care and treatment of dementia in northern communities was dependent on community size, presence of health care services, nursing homes and caregivers, degree of family and social interactions, and cultural expectations regarding elderly behaviors.

Changes in normal daily activities, assessed in conjunction with family members, could potentially be the most informative measure of cognitive status for older adults in the north. Disturbances in sleep cycles may not be an accurate indicator in the far north where either 24 hours of daylight or 24 hours of darkness can alter sleep cycles for many individuals. Behaviors such as wandering might be tolerated within a community, however environmental conditions, such as extreme cold temperatures in the winter, can have fatal consequences for disoriented older adults. Consultation with community and family members is recommended to assess delusions, hallucinations, or an aggressive episode, as interpretation should be culturally defined.

Older adults with dementia living alone and experiencing behavioral symptoms related to memory loss create concerns for their safety (Tierney et al., 2004). At present, northern housing constraints result in few older adults living alone, although the number of older adults living alone in the Northwest Territories has been increasing (Northwest Territories Health and Social Services, 2004a). Living with family members in the community enables supervision and surveillance of environmental safety hazards.

Challenges in delivering dementia care and education result from the wide variations of knowledge that exist among community members, informal caregivers, as well as among physicians, nurses and other health care providers (Iliffe & Manthorpe, 2002). As chronic illness related to cardiovascular disease are reported as increasing in northern populations, health care providers in the north need to be aware of the associated potential for vascular dementia as well as Alzheimer's disease. However, the assessment of dementia in the older adult

population, that could lead to identifying an increased need for dementia care services for northern people, involves the development of a shared knowledge among community and health care professionals about dementia.

1.4.5 Telehealth and Continuing Nursing Education

Recent reports on the Canadian health care system highlighted the need to address northern health issues (Kirby & LeBreton, 2002; Romanow, 2002).

Distance to services has been found to decrease utilization of services (Nemet & Bailey, 2000). These reports define the gap between health services delivered to rural and remote versus urban Canadians as enormous (Nagarajan, 2004). The present expansion of telehealth in Canada attempts to bridge the gap in north-south inequities by increasing the ability of urban health care specialists and northern health care providers and correspondingly northern residents, to have clinical contact without the expense of travel costs (Muttitt, Vigneault, & Loewen, 2004).

Telehealth is a video and imaging communication technology that has been used in distance education, conferencing, medical consultation, and patient assessment. Muttitt et al. (2004) discusses the uses of telehealth applications in rural and remote healthcare practice. Barriers to the use of telehealth are the fears that accompany new technology, the accessibility of technical support, and the acceptance of and enthusiasm for a new method of information acquisition and educational enhancement. Further, Muttitt et al. indicated that telehealth use needs to reflect the needs of the client in order for it to be successfully and adequately integrated into the health care environment.

The increasing use of telehealth in rural and remote areas has been identified as having potential for nursing education, as well as clinical

consultations, and is one of many strategies that could improve access to continuing nursing education for northern nurses (Kulig et al., 2003). Given the recurrent theme in the nursing literature that northern nurses bare the burden of responsibility for the provision of health care services in non-urban communities, Kulig et al. reported that the increased responsibility of rural or remote nurses has not been supported by nursing education programs in Canada to the extent that nurses are not adequately prepared for the ‘generalist’ roles in these practice settings. Telehealth is one method of continuing education that has the potential to fill the gaps in knowledge for rural and remote practicing nurses. Telehealth can also contribute to professional education about dementia, and other clinical issues and concerns, as well as assist in the development of interprofessional networks for dementia care. Further, it is hoped that the use of ongoing telehealth education would address both services for older adults and potentially the recruitment and retention issues plaguing northern health care. For example, supportive collegiality, mentoring, and skills building have been reported to be outcomes of educational processes (Gibb, Anderson, & Forsyth, 2004).

1.4.5.1 Telehealth and Dementia Assessment

Loh et al. (2004) explored the use of telehealth in Australia for AD assessments of rural patients. This study compared the results of face-to-face versus video assessment using the Mini Mental State Exam (MMSE) and the Geriatric Depression Scale (GDS). The study found that the two methods of assessment produced similar findings although the authors recommended telehealth only as a method of providing ongoing clinical consultation. The authors did not support telehealth for initial cognitive assessment, suggesting that there

was a potential for assessments to be affected by the level of cognition of the patient or comfort with the video method.

In the study by Loh et al. (2004), the cultural heritage of the patients was not reported. As there are concerns with cultural bias in assessment tools (Teresi, Holmes, Ramirez, Gurland, & Lantigua, 2001), cultural bias related to traditional cultural beliefs and cultural etiquette could additionally complicate the use of telehealth with the older adult Aboriginal population. Assessment of the perception of telehealth by northern older adults may assist in determining approaches to the use of this technology in dementia assessments and ongoing clinical consultations.

A Canadian report on telehealth in northern locations indicated that the technology was generally very well received (First Nations and Inuit Health Branch - Health Canada, 2001). This report attributed the acceptance of telehealth to the education and patient support given to community members by the nursing station or community health centre staff. Muttitt et al. (2004) explored the challenges of integration of telehealth into Aboriginal health care. Challenges to the sustainability of telehealth involved funding, internet service availability, readiness of the communities, and human resources. Integration of services is still developing and the evaluation of the potential for this technology cannot yet be determined. However, the Aboriginal Telehealth Knowledge Circle (Muttitt et al.) was reported as working to address knowledge transfer and cultural issues in the use of telehealth that may assist in the evaluation of telehealth for use in dementia assessments. A present study using telehealth for dementia assessment and consultation in older adults in rural Saskatchewan, inclusive of northern locations,

should also provide information regarding dementia assessment and the use of telehealth with older Aboriginal adults (Morgan et al., 2005).

1.5 Summary

This literature identified that knowledge about etiology of dementia has been increasing rapidly. The DSM-TR-IV (APA, 2000) does not capture the current diagnostic indicators for all of the subtypes of dementia. As the DSM-TR-IV might be the diagnostic resource available in northern health care, much of the current information about dementia might not be communicated to northern health care practitioners.

Although the literature on dementia provides information about the variations in cultural understanding and family caregiving for older adults with dementia, the care of older adults with dementia in northern Canada has received little attention in the empirical nursing and broader health care literature. There are many factors involved in the care of older adults with dementia. In northern communities, the culture, aging, filial piety, and changes in cognition have not been explored in the nursing literature. Another gap in the literature surrounds community and institutional care of older adults in northern Canada.

As the population of older adults in northern and southern Canada increases, concerns regarding the prevalence of dementia throughout Canada need to be addressed. Northern communities receive a lesser degree of health care services than southern communities and access to services involves financial costs and lengthy travel. Therefore, investigating the provision of care by RNs in northern communities to older adults with dementia may serve to affect the service

provision and future planning on northern health care issues and initiate changes in the manner in which health care services are provided to older northern residents.

2 CHAPTER TWO – MIXED METHOD DESIGN AND QUALITATIVE METHODOLOGY

2.1 Mixed Method Research Design

The present study used both qualitative and quantitative data taking a mixed methods approach to the research question: **What do RNs in northern Saskatchewan perceive as key issues and concerns associated with the care of older adults with dementia?** The purpose behind the use of a mixed methods approach is to provide an in-depth analysis of a research area in order to answer the research question (Johnson, Onwuegbuzie, & Turner, 2007; Morse, 2003). The research areas of this project were dementia care and northern nursing practice.

One of the strengths associated with the use of mixed method approaches in research relates to the capacity to benefit from the advantages of both methods, whereby the researcher gains a larger perspective on the problem from the two sets of data (Morse, 2003). Further, Johnson et al. (2003) suggested that the use of “elements of qualitative and quantitative research approaches provide . . . depth and breadth of understanding and corroboration” (Johnson et al., p. 123). There are many authors who have suggested designs for conducting mixed method projects; mixed methods research takes on multiple forms and conventions. Therefore it is important to be clear in the description of a mixed method project as to how the concepts and inferences identified within each method will inform the other

method, and at what point in the project the concepts and inferences will be combined (i.e., concurrently or sequentially) (Creswell, 2003; Johnson et al.).

This study used the sequential exploratory mixed method design outlined by Morse (2003) (Appendix C). Morse (2003) outlines the designs of mixed method research studies suggesting that one method leads the research project, supported by a second method. The qualitative method of grounded theory was the dominant methodology in this study, informed and supported by a quantitative secondary analysis of the survey data from the national study “The Nature of Nursing Practice in Rural and Remote Canada” (Stewart et al., 2006). In this QUAL → quan (Morse) mixed method design, a descriptive quantitative secondary analysis of the survey was conducted based on the themes that emerged from the qualitative project, to provide contextual data on dementia care, rural and remote nursing practice, and health care, contrasting the location of nursing practice in northern compared to southern Canada. The overall “theoretical drive” for the project was inductive; therefore, the use of the secondary data set in this project was to discover how the findings from the theory relate to the research area on a broader level.

Although the methods are complementary, it is important for mixed method research that each project is methodologically independent, adhering to the assumptions and language of the particular method (Morse, 2003). Therefore, the methodology of each method and their findings are presented separately. This chapter presents the qualitative methodology of grounded theory as used in this study. Chapter Three presents the grounded theory findings. Chapter Four presents the method by which the concepts in the grounded theory informed the

quantitative secondary analysis of the national survey data. Chapter Five reports the findings of the quantitative descriptive analysis. The discussion of the combined inferences from each of the methods will be presented in Chapter Six, followed by the implications for nursing practice, research, health care policy, and concluding statements.

2.2 Qualitative Method

2.2.1 Design

The focus of this study was to explore dementia care in northern Saskatchewan from the perspective of northern RNs. The method of grounded theory was appropriate for this study as little is known about dementia care in northern Canada and the practice of northern RNs working with cognitively impaired older adults. The exploratory nature of the research question further supported leading with an inductive, qualitative research design (Morse, 2003).

Grounded theory was the qualitative method chosen for this study, based on the work of Glaser and Strauss (1967). Grounded theory provides a systematic, rigorous method for developing theory. Because the theory is constructed from data collected in a study, it is termed “grounded” or based in this set of data (Glaser & Strauss). Transcripts and field notes from interviews with northern RNs were used as the data set from which to construct the theory, which is consistent with a grounded theory approach. Grounded theory can be used to develop substantive theory (developed for a substantive, or empirical area of inquiry) or formal theory (developed for a formal or conceptual area of inquiry). The focus of the present research is on developing substantive theory with respect to dementia care in northern nursing practice.

Theories provide an understanding of the present situation or behavior, predictions about the future, and what the consequences of the situation or behaviors might be. The grounded theory method results in a parsimonious construction of the researcher's understanding of a given situation or behavior, developed around a core concept that accounts for a large portion of the variation in a pattern of behavior (Glaser & Strauss, 1967). The elements of theory are conceptual categories and their conceptual properties, and hypotheses about the relationships between them. As defined by Glaser and Strauss, a category stands by itself as a conceptual element of the theory; a property is a conceptual aspect of a category (e.g., conditions, consequences). Both categories and their properties are concepts indicated by the data (and not the data itself). As categories and properties are developed and relationships between them are defined, the accumulating inter-relationships form an integrated core of the theory. Glaser and Strauss state that the grounded theory method is especially useful for identifying behavior, processes, or action in the data and making suggestions and potential hypotheses about the common or everyday problems reported by the participants. During analysis the researcher continually asks what is happening in the data, what process is at issue, what are the conditions under which the process develops and varies, and its consequences. Coding with gerunds helps to preserve the processes identified in the data.

“A theory must have fit and relevance, and it must work. . . . [and] be readily modifiable” (p. 4) as new data comes along (Glaser, 1978). Fit refers to the theory fitting the data or emerging from the data rather than being forced or selected to fit pre-existing categories (i.e., the properties are generated from the

data). The theory needs to be meaningful and relevant to the research area (i.e., northern nursing practice and dementia care). The theory must work, which means it should be able to explain what happened, predict what will happen, and interpret what is happening in the substantive or formal area of inquiry (i.e., the process by which RNs in northern Saskatchewan develop an awareness of dementia).

Another criterion identified by Glaser is modifiability, which means that the theory can be modified as new data are acquired. Social situations are always changing, thus theory generation is never complete. Finally, grounded theories are conceptual and “transcend” or become broader than the data, a characteristic that allows them to be modified and applied to other social problems.

Although the use of the grounded theory method in this study was based on the work of Glaser and Strauss (1967), Charmaz’s (2006) constructivist perspective on grounded theory was more consistent with my perspective of the researcher’s role in the research process and how the personal attributes of the researcher inform their reflections on the data. Charmaz contends that the researcher is a co-participant in the construction of a theory, because theory is developed through interactions with people, and is influenced by the perspective and experiences of the researcher. A constructivist approach to grounded theory asserts that the researcher seeks to learn about the problem from interacting with the participants, and does not assume a distanced scientific stance from the participants or the data, or assume that the resulting theory provides the only interpretation of the data. Further, the researcher can be viewed as becoming part of the research by virtue of being a part of the lives of the participants and by reflecting on their own personal experiences in the area being studied. This

perspective is a deviation from the method of Glaser and Strauss, who talk about discovering theory as emerging from data, with no influence from the observer.

As the researcher for this project, my previous experience working in northern Canada as a RN played a role in the collection of data and the analysis. My experience enhanced data collection by decreasing the level of distraction that arose during data collection, as the northern travel and two of the northern communities were familiar from my previous work experience in the north. My northern nursing experience also decreased the nurses' perception of me as an outsider, and enhanced their perception of me as someone knowledgeable about the challenges in their practice roles. Therefore, using a constructivist approach, in which the researcher recognizes and accepts the potential for their perception to have an effect on, and inform the construction of the theory, fit with my inability to exclude my work experience as a part of what I bring to the study. Review of the developing analysis with my supervisors challenged me to continually explore my interpretations of the data.

2.2.2 Sampling Method

Theoretical sampling (Glaser & Strauss, 1967), which is used to select participants with relevant experiences, was conducted at two levels: community and individual RNs. Initially, four communities that had a LTC facility or a Special Care Home were chosen with the rationale that a community with a facility for LTC would increase the potential for RNs to have interactions with older adults with dementia. Later in the data collection process, interviews were conducted in two communities without LTC facilities for contrast. This enabled

further exploration of the concepts that emerged from the interviews, consistent with theoretical sampling procedures for theoretical saturation in grounded theory.

The sample of northern RNs for the qualitative study was drawn from the total population of RNs who were employed in health care facilities in the target communities within the three northern Saskatchewan health authorities at the time of the study. The participants included all practicing RNs who were willing to volunteer for an interview. The initial sampling method was a modification of the theoretical sampling approach from grounded theory (Glaser & Strauss, 1967). In theoretical sampling the researcher selects participants whose experiences assist in developing the emerging theory. As there were a limited number of RNs in the target communities and health care facilities, interviews with all available participant volunteers in each community were used to begin the analysis. Theoretical sampling in this instance included sampling from RNs as a knowledgeable source of information on dementia care in northern Saskatchewan. Later in the study, theoretical sampling was used to select participants in two communities without LTC facilities to collect additional information to saturate the emerging categories.

Sampling a diverse representation of the northern RNs from a variety of communities, facilities, positions, years of employment, educational levels, and age groups helped to increase the variability in the data. As there is a large potential for staff turnover in northern nursing positions, no limit for length of duration of employment in a position was required although participants with more than one year of work experience in their communities prior to their interview were targeted. The aim of data collection was to acquire a wide range of

experiences of participants from which to explore perceptions of dementia and dementia caregiving.

2.2.3 Work Settings and RN Roles

The participants worked in one of three integrated facilities or one of three nursing stations. Integrated facilities housed the community's health services such as hospital services, LTC, public health, community health programs and physician clinics. In the communities with nursing stations, RNs provided all of the health care services to the community from emergency and acute care to community/public health and home care programs. The responsibilities of the RN participants in the nursing station were more diverse than the RN participants in the integrated facilities. In the integrated facilities the RNs provided care within a designated role such as acute care or emergency, or a public health or educator position. However, the public health and educator positions did include the provision of services to other communities, and similar to a nursing station RN position involved the provision of programs in the community, schools and in client homes.

The three communities with integrated facilities had physicians in attendance on a daily basis. Communities with nursing stations had physician visits at least one day a week. Four of the communities had integrated facilities designed to care for clients in need of acute and ongoing inpatient LTC, public health, and community home care.

The integrated facilities had designated LTC beds. One community with a nursing station also had a Special Care Home. In Saskatchewan, Special Care Homes provide care for individuals whose care needs have exceeded the level of

care that can be delivered by informal caregivers and home care providers (Government of Saskatchewan, 2003). Minimum requirements of Special Care Homes include 24-hour supervision, personal care assistance, medication safeguarding, and social activities. Admission to a Special Care Home is commonly the responsibility of the regional health authority, although the facility needs to meet accreditation standards to operate as a government-funded facility. In the northern community with a Special Care Home this government-funded facility was operated by the band, and provided respite, short-term care, and LTC.

In one of the integrated facilities, an RN was in charge of the care of the LTC residents. In the other two integrated facilities, Licensed Practical Nurses (LPN) were charged with the responsibility for providing medication and supervision of nursing aides. LPNs are health care workers who provide care under the supervision or direction of an RN or physician. Nursing aides (also called home care aides when working in the community) provide personal care assistance to clients in their homes or in continuing or LTC facilities under the supervision of a LPN, RN, or physician. In the community with a Special Care Home, care was provided using LPNs and nursing aides. RNs were called to assist with care when needed. Sometimes residents were brought to the nursing station if they needed a health concern addressed.

All six communities had home care programs in varying stages of development. Home care has only been operating in northern Saskatchewan communities since 2000 (Northern Inter-Tribal Health Authority, 2006). This service is tailored to the needs of each community. Of the six communities, only two of the home care programs included an RN hired exclusively to provide and

coordinate home care services. Recruitment of RNs for home care in the north has been problematic therefore most programs were administered by an LPN or a coordinator who supervised the home care aides. Of the two communities with an RN as the supervisor of the home care program, only one volunteered for an interview.

2.2.4 Participants

Fourteen RNs volunteered to be interviewed for this study. All of the participants worked in one of six northern Saskatchewan communities. The population of these communities is predominantly Aboriginal and Métis. Not all of the participants were permanent residents in these communities. RNs in one community worked on a 2-week rotation, two weeks in the community and then a two week break where the RNs would commonly leave the northern community for their home community in the south of the province. Nurses in the other communities most often lived in the community in which they practiced although they would leave for vacation or continuing educational opportunities.

Thirteen of the 14 participants interviewed were female. Their ages ranged from 28 to 60 years with a mean age of 49.2 years (*Mdn*: 54 years). Seven of the nurses were married or living with their partner although their partner did not always reside in the northern community where the RN was working. Three of the participants were single and four were divorced or widowed. Four of the nurses had a dependent child or relative; of these, 3 had one dependent and 1 had two dependents. All of the nurses were Canadian citizens and 3 were of Aboriginal, Métis, or Inuit ancestry. Half of the participants reported that their childhood community was rural, having a population of less than 10,001.

Six of the participants reported their highest level of education in nursing as a diploma and eight participants had a degree in nursing. Five of the nurses with a degree were originally educated at a diploma level. Two of the participants had a nurse practitioner diploma, one had advanced community health certification, and another had health administration education. Twelve of the 14 participants were educated in Canada. The participants were first licensed to practice in Canada between the years 1965 and 2005. Eight participants were educated and first licensed in Saskatchewan. Only three participants were currently licensed to practice in other Canadian provinces and Territories.

The range of years worked in nursing was between six months to 40 years. All of the participants were working in full-time permanent positions although two of the participants reported being in a contract employment arrangement and three of the participants reported having more than one nursing position. Over half of the participants ($n = 8$) worked in integrated facilities that provided acute care, LTC, emergency services, and public health services. Of these nurses, two were primarily employed in administrative positions (although they also assisted in client care), three were in community/public health positions, two were in nurse practitioner positions, and one was an acute care staff nurse. The remaining six participants were employed in nursing stations, two in community health nurse positions (the general staff nurse position title in a nursing station), two as Nurse-in-charge, one as a Home Care RN, and one as a Program Coordinator. The number of workplace RN positions in these facilities ranged from 2 in a nursing station to 20 in one of the larger integrated facilities.

The participants reported that the current practice that took most of their time was acute care ($n = 2$), community health ($n = 2$), home care ($n = 1$), primary care ($n = 7$), and administration ($n = 2$). Table 2.1 presents the responses to questions about the length of time the participants had been employed in their current position, length of time with their current facility, and years employed as a northern nurse. Although these data indicate that four nurses had held their position for under two years in their current facility, only one had been employed less than two years as a northern nurse. Nine of the participants had been employed as a northern nurse for over six years. Only six participants indicated that they expected to remain in their current position for more than two years.

Table 2.1 *Participant employment characteristics*

Variable	Number of Years						Total
	<2	2-5	6-9	10-14	15-19	20+	
Length of time employed by primary agency	4	3	2	2	2	1	14
Length of time in current Position	4	6	3	1			14
Length of time employed as a northern RN	1	4	1	1	4	3	14
Length of time expected to stay in present position	8	3	3				14

Eleven of the participants reported their work schedule as involving 8-hour days and three reported working 12-hour rotating shifts. Within the year prior to the interview ten of the participants reported working full-time hours and four reported working more than full-time hours. Nine of the participants were required

to be on-call and reported their on-call hours as variable (e.g., daily, one week per month, 72 – 168 hours). Twelve of the participants reported nurses as the first health care contact in their communities and 12 reported using an interpreter as part of their practice. Two of the participants had spent their entire careers in northern Saskatchewan.

Of the 14 participants, 8 reported that they had access to telehealth in their workplaces. Eleven of the RNs had used telehealth in the past for continuing education of which 10 rated their satisfaction as good to very good. Further, 7 participants had used telehealth for patient assessment with satisfaction rated by 6 as good to very good. Nine of the participants perceived barriers to continuing nursing education. Barriers identified included distance to events and travel issues that involved financial concerns, lack of staff to cover for educational events, and difficulties in attending during the work day.

The diversity in the participants' prior nursing experience in different clinical areas is listed in Table 2.2, where eight of the RNs identified past employment in a LTC facility. For the participants employed in a nursing station ($n = 6$), three reported knowledge of a dementia client during the past year and only two of the participants, both of whom had worked for over 10 years in the north, reported ever having cared for a dementia client in their northern nursing career (one could identify five clients and the other ten). All participants employed in an integrated facility ($n = 8$) remembered caring for a dementia client, however, only one participant could report knowledge of more than three in the past year. The number of dementia clients cared for over the career of the participants who were working in integrated facilities ranged from 2 to 30.

Table 2.2 *Prior nursing experience*

Previous Work Setting of Participants

General Hospital – 11
Nursing Station - 8
LTC/Nursing Home – 8
Community Health Agency – 7
Integrated Facility – 6
Home Care – 5
Educational Institution – 4
Rehab/Convalescent Centre – 3
Mental Health Centre – 3
Association Government – 2
Physician's Office – 2
Private Nursing Agency/Private Duty – 2
Self-Employed – 2
Business – Occupational Health – 1

2.2.5 *Ethical Considerations*

The study was approved by the University Advisory Committee on Ethics in Behavioral Science Research. The Saskatchewan health care facilities approached to participate in this study are located within the three northern health authorities: Athabasca, Keewatin Yathee, and Mamawetan Churchill River (Appendix D). In all, there were seven health administrative bodies contacted and six of these gave written consent allowing RNs to be approached to participate in the project. The study complied with the policies and procedures of each of the health authorities and facilities with respect to the collection of data from their employees.

All of the study participants who participated in the research were verbally informed about the nature of the study. Nurses who volunteered to participate were provided with a consent form outlining the purpose of the study, the time commitment, the ethical considerations, and use of the findings (Appendix E). Willingness to participate in the research was confirmed by signing the consent form. Participants were provided with a copy of the consent form for their personal records. Twelve of the fourteen interviews were tape-recorded and transcribed verbatim into a typewritten electronic document. Participation in the study was voluntary and participants were free to withdraw from the study at any time.

Although there was no direct benefit for the RNs to participate in this study, there were no known foreseen risks. Recollection of events and issues were not perceived as stressful by the RNs, therefore no professional follow-up was required. If the interview had caused distress, the researcher, a Registered Nurse, would have referred the participant to the Employee and Family Assistance Program through their health district for counseling or supportive services as needed. Participation was conditional on the availability of counseling services if the need should arise.

Confidentiality of the participants' information was protected through the use of code numbers to represent the participants in all documentation. Only the researcher knew the identity of the participants. Neither participant names, nor their associated communities, appear in any written or presented material. Privacy and confidentiality during the interviews was maintained through the use of locations chosen by the participants. The audiotapes, consent forms, transcribed information, and all other research documents were stored in a locked cabinet at

the College of Nursing, accessible only by the researcher for the duration of the study. Participants were informed that when the study concludes, all data would be retained and stored by the researcher's supervisors, Dr. Norma Stewart and Dr. Debra Morgan, in a secure area at the University of Saskatchewan for a minimum of five years.

2.2.6 Recruitment

RNs working in the facilities in the targeted communities were approached to participate in this research project after approval to proceed was granted by the health authorities and the facilities. Once access to the site was permitted, contact was made with the administrator of each facility by telephone to introduce the researcher, explain the study, and describe the contents of a package of information that was then mailed to each site for the purpose of participant recruitment. The package contained the letter of intent describing the study (Appendix F), a poster for display in staff rooms (Appendix G), and an information pamphlet on the study to be distributed to each RN at the facility (Appendix H). The purpose of the letter to the administrator was to request their support for the study and to ask them to display the poster and distribute the information pamphlets. The poster invited the RNs to contact the investigator by telephone if he or she was willing to participate in the study. The information pamphlet for RNs included a section for potential participants to respond directly to the researcher indicating consent to be contacted by telephone for possible participation in the study and to indicate their choice of location for an interview. A stamped self-addressed envelope accompanied the pamphlet. The administrators

of the facilities were also contacted by telephone when the initial mailing occurred to set a tentative schedule for community visits.

Only one of the participating facilities displayed the poster for participant recruitment and only two of the communities distributed the pamphlet for recruitment. Because of limited success using posters for recruitment of study participants, a scheduled on-site visit was made to four of the communities. On these visits an informal introduction to this research was given to inform the staff about the study and the voluntary nature of participation. All of the sites made accommodations for interviews during the workday.

Challenges in participant recruitment included the small number of RNs in the target communities, low staffing levels during the on-site visits, and vacation leaves during the summer months. Where initial on-site interviews were not practical for an RN, an alternate interview location was arranged. Unforeseen events occurred that resulted in changes to interview schedules such as the weather washing out the road into one community, practice demands that resulted in the need for a follow-up visit to another community, long travel distances to communities, and the cost of travel in northern Saskatchewan. Telehealth videoconferencing was used in two interviews, which was well received by the participants.

2.2.7 Data Collection Procedure

When a RN indicated a willingness to participate in the study, the purpose of the research was explained and the RN was asked for permission to audiotape the interview. Twelve of the 14 participants consented to an audiotaped interview lasting ½ - 1½ hours that focused on their perceptions of dementia care and

services for older adults with dementia in the community where they were currently employed. Two of the RNs chose not to be audiotaped for personal reasons. When the interview was not audiotaped, notes documenting the discussion were made immediately after the interview within the field notes for the site visit. Each RN was given a choice of location for the interview. Eleven of the interviews were conducted in the facilities in the target communities, two were conducted via telehealth, and one took place in Saskatoon.

At the time of the interview, the participants were provided with a written consent form (Appendix E) describing the purpose of the study, responsibilities of the researcher, responsibilities of the participant, possible risks associated with the study, the voluntary nature of participation, confidentiality, use of the information, and names and telephone numbers of the Office of Research Services and the thesis research supervisors. Potential study participants were then invited to sign the consent form. Each audiotaped interview was transcribed verbatim. Each participant was interviewed once.

Participant interviews were carried out over a period of one year. Each participant was interviewed once. The high turnover of nurses in northern communities and the cost of travel to collect data were identified as factors that would affect transcript review and member checking in this study. Therefore, other procedures were used to ensure rigor and trustworthiness in data collection and analysis (Lincoln & Guba, 1985).

Travel was arranged to four of the northern communities by plane and to two communities by road. One community was accessed by both modes of transportation. Road travel was complicated by rainy weather that washed out a

road for a few days. The communities visited ranged in distance from 480 kilometers by road, to 780 kilometers by air from Saskatoon. Travel by plane to one northern community was assisted by Saskatchewan Northern Medical Services, and a commercial flight was taken to two of the communities. Traveling by plane was as adventurous as travel by road; one flight in early fall lacked heat. Two communities were visited twice.

An interview guide containing a general outline of questions for the interviews can be found in Appendix I. All 14 participants completed a brief questionnaire after the interview (Appendix J). The questionnaire questions were derived from the national survey component of the multi-method study, “The Nature of Nursing Practice in Rural and Remote Canada” (Stewart et al., 2005) (Appendix K). The purpose of the questionnaire was to ensure uniform collection of demographic information across the two sets of data, the qualitative study participants and the survey participants in the secondary analysis, so that the presentation of the two samples of participants would be consistent. The six new questions included addressed the participants’ past nursing experience, experience with older adults with dementia, and separated their experiences and satisfaction level with telehealth into the areas of continuing education and patient assessment.

2.2.8 Data Analysis

In keeping with the methods of grounded theory, concurrent data collection and analysis were ongoing throughout the project (Glaser & Strauss, 1967). The qualitative software program NVivo was used to store, code and organize the interview data. Grounded theory analysis uses the constant comparative method where new information is compared to data already acquired to identify

similarities and differences in the data (Glaser & Strauss). Each interview was sequentially coded using open coding, which assisted in the recognition of patterns in the data. The purpose of open coding is to ensure that the analysis maintains a fit with the data so that the resultant conceptual interpretation is relevant to the structures and events from the data. Open coding begins with the first interview, and ends when patterns became suggestive of categories, and categories begin to be named. Open coding in this study ended when a pattern of insulating and expanding conditions influencing the awareness of dementia was identified from the data.

Selective coding follows the process of open coding whereby, assisted by memos, categories become more developed and a core category, basic social problem, and basic social process is constructed from the data (Glaser & Strauss, 1967). In selective coding only the data that adds to the developing theory, and provides explanation and understanding of the core variable, is coded. Theoretical coding examines the relationships that are developing between the selective codes and categories. The theoretical sampling then leads the collection of additional data and sampling to extend and fill gaps with the aim of theoretically saturating the categories in the emerging theory.

Theoretical sampling to explore all possible variations of the properties in a category to saturate categories (Glaser & Strauss, 1967), directed data collection to communities without LTC facilities to explain gaps in the concepts and extend concepts. The process of writing memos aided theoretical development. Memos described the ongoing analysis and theorizing about categories and the limits of the categories. Data collection and analysis continued concurrently until patterns

reappeared in the coding and memos, indicating that theoretical saturation of the emerging concepts had been reached.

2.2.9 Qualitative Rigor

In a grounded theory research design the researcher is the instrument for data collection. Rodgers and Cowles (1993) suggest that the researcher brings with them to the study a conceptualization of the problem, a knowledge base pertaining to the problem area, and a philosophy in relation to the problem. Researchers develop psychological and emotional responses to the participants, the data, the analysis and the final product of the report; partiality resulting from these factors is documented through the use of an audit trail (Rodgers & Cowles).

Rodgers and Cowles (1993) stated that the audit trail is important for the credibility of the investigation. The audit trail includes the use of field notes after each interview (e.g., documenting the interview setting, the participant's nonverbal behavior, setting distractions, etc.) and memos that document methodological decisions (e.g., interview question changes). The interview data, field notes, and memos are dated so that the progression of the data collection and analyses can be tracked.

In qualitative research "trustworthiness" is the term often used to refer to the nature of rigor in the data analysis. Trustworthiness is demonstrated through adherence to the criteria of credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985). Credibility refers to the level of clarity of the study's findings. To enhance credibility, this study used: (1) verbatim transcription of all but two of the interviews, (2) analytical discussions with the dissertation supervisors and objective peers, to explore the subject of inquiry, and

to test hypotheses, (3) excerpts from the transcribed interviews to describe the developing theory using the participants' words, and (4) memoing and diagramming to record development of ideas, categories, and concepts in the data.

Member checking, as a measure of qualitative validity, was not used in this study. Challenges in engaging the participants in member checking, retention of RNs in northern positions, travel costs, and the potential for recruitment difficulties, were thought to affect consistency in member checking. Further, although member checking has been a tool to validate the meaning of the participant's perceptions in an initial interview, Sandelowski (1993) has suggested that the use of member checking as a procedure in qualitative research has inherent pitfalls such as when participants' change or omit portions of interview data. Returning to participants for validation of the analysis constructed from multiple realities may not be met with favorable responses as the participant may not understand the interpretive representation of the data or the contributions of the experiences of other participants. Therefore, in this study only interview data was collected in keeping with the understanding of grounded theory as temporal, interpretive, and constructed using multiple understandings about dementia and dementia care in northern nursing practice.

Transferability refers to the acquisition of a "thick description" that enables someone interested in making a transfer of the findings to other populations to determine whether the concepts are similar enough to make such a transfer (Lincoln & Guba). "Thickness" of the data refers to the detailed description produced through the process of comparative analysis and memoing.

Confirmability of the data refers to ongoing documentation of the research process

established by recording the sequence of memos and interview data (Lincoln & Guba, 1985) in the form of a written log of the progression of events.

Dependability reflects confirmability whereby the use of an audit trail enables another reader or researcher to follow the progression of events in the study and understand their logic (Sandelowski, 1986).

2.3 Summary

In summary, this study used the sequential exploratory mixed method QUAL → quan design (Morse, 2003). The qualitative study, using the method of grounded theory (Glaser & Strauss, 1967), led this project, followed and supported by a secondary analysis of national rural and remote nursing survey data. The method of grounded theory was used to analyze the interview data and descriptive analyses were performed with the survey data. Each of the two studies was methodologically independent.

The focus of this study was to explore dementia care in northern Saskatchewan from the perspective of northern RNs. Interviews data was collected and analyzed using the constant comparative method of grounded theory. This study included a constructionist approach to grounded theory (Charmaz, 2006), which contends that the theory provides one understanding of the problem, and the researcher is a co-participant in the research process.

3 CHAPTER THREE - QUALITATIVE FINDINGS

This chapter presents the findings from the grounded theory analysis on northern nursing practice in relation to dementia titled, *Insulating and Expanding the Awareness of Dementia in Northern Nursing*. The theory was developed from the analysis of the interview transcripts, and field notes, collected from RNs working in northern Saskatchewan health care facilities. This chapter is organized into sections that correspond to grounded theory development where the basic social problem sets the context for the discussion of the basic social process (Glaser & Strauss, 1967).

3.1 The Context of Northern Nursing Practice and Dementia Care

The main concern that surfaced early in the analysis, grounded in the perceptions of all the study participants, was that dementia was not a prominent issue in northern nursing practice. The participants identified few older adults with dementia in their work communities and expressed that they had knowledge of only a small number of older adults with dementia during their northern nursing careers. One participant prepared for the interview by asking members of the community about their grandparents and found no one that could recall a story about someone with a memory problem in this community, other than the one older adult currently known to have early stage dementia.

Participants paused and reflected on why dementia was not often seen in their practice settings. Their responses included the perceptions of the older adult

population as being “very small,” limiting the number of people that could be affected by dementia. When one participant with a long career in the north and an interest in community elders was asked about the number of clients she had known with dementia, she replied, “I’d be lucky if I could find one per community.” Yet another wondered, “So to me it’s interesting – how come? Why doesn’t the Aboriginal population have a problem with dementia?”

Participants reported that they did not view their knowledge about dementia as “current” and had limited clinical involvement with older adults. The participants shared that they had not given much thought to dementia and perceived this study as limited in its ability to contribute to the development of knowledge about RN involvement in northern dementia care, since dementia was not commonly addressed in practice by RNs in northern Saskatchewan. Further, the participants suggested that the study would be better suited to the practice of Licensed Practical Nurses (LPNs) as their role in northern health care often involved the care of older adults in LTC and community-based home care.

However, the participants conveyed that participation in the interviews provided them with an opportunity to reflect on the older adults in their northern communities. In some instances participants suggested that older adults in their communities were an “overshadowed” or “forgotten” population from the perspective of health care services. One of the rationales given for the perspective of older adults as overshadowed was related to the large percentage of the population (37%) in northern Saskatchewan under the age of 15 years (Irvine & Stockdale, 2004). For most of the participants interviewed, reflecting on dementia

in their practice resulted in the awareness that services for older adults were a missing element in northern health care.

The foundation of the basic social problem in this grounded theory analysis was: 1) the limited ability of the participants to find examples of dementia in the northern older adult population, 2) the limited clinical prominence of dementia care or memory related concerns in registered nursing practice, and 3) the limited resources and services for older adults wellness in northern Saskatchewan. What evolved from this perspective was an identification of the situations and behaviors that shaped an understanding about how RNs develop an awareness of dementia in northern Saskatchewan.

3.2 Awareness of Dementia in Northern Nursing Practice

The theory, *Insulating and Expanding the Awareness of Dementia in Northern Nursing*, provides a theory for understanding and explaining the awareness of dementia by RNs working in small northern communities. The central tenet of the theory is that there are several conditions that influence an RN's awareness of dementia in northern nursing practice, and affect their capacity to provide care. These conditions are conceptualized as *insulating the RNs' awareness* and *expanding the RNs' awareness* of dementia and dementia care in northern nursing practice. In a grounded theory project, a theory about a social process is developed using the systematic constant comparative analysis of collected data. In this study, the process of insulating and expanding the awareness of dementia addressed the research question by identifying the key issues and concerns associated with the care of individuals with dementia as perceived by the northern RNs.

3.2.1 Insulating and Expanding Awareness

Insulating awareness refers to the conditions that decrease the RNs' ability to form an awareness of dementia in older adults. These conditions can be perceived as barriers that limit the development of knowledge about dementia, interaction with older adults, and concern for older adult wellness. The conditions that were found to be insulating the RNs' nursing practice distanced the RN from developing an understanding of dementia for northern older adults and decreased the capacity of the RNs' to provide care to affected individuals and their families.

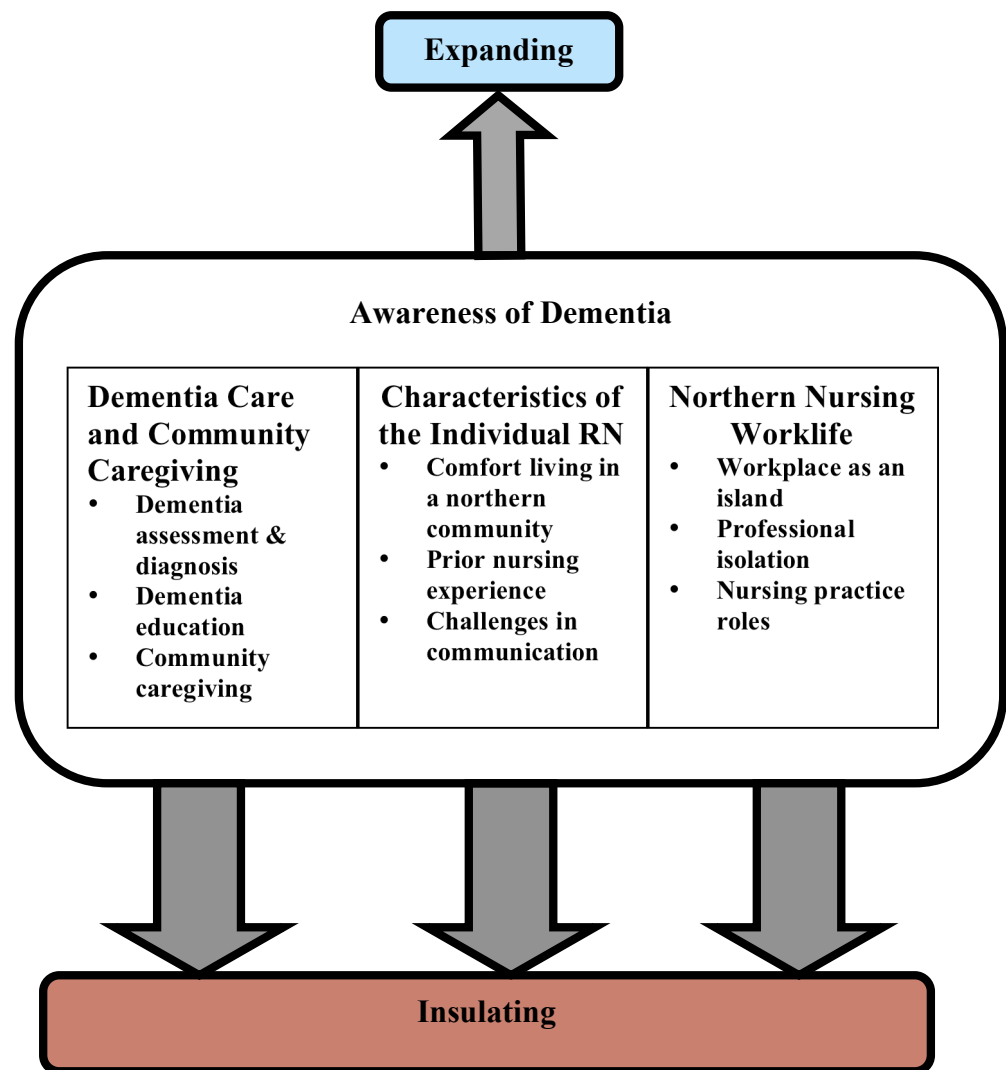
Expanding awareness refers to conditions that interacted to increase the RNs' ability to form an awareness of dementia in older adults. These conditions increased the RNs knowledge about dementia, and their interaction with, concern for, and interest in the older adult population. Expanding the awareness of dementia increases the capacity of the RN to provide care to affected individuals and their families.

3.1.2 Theory Categories

The conditions influencing awareness of dementia are captured by three conceptual categories: *Dementia Care and Community Caregiving*, *Individual Characteristics of the RN*, and *Northern Nursing Worklife* (Figure 3.1). Although there are larger administrative and political structures that affect health care and the practice of nursing in the north, these categories reflect the data from the interview transcripts and field notes with the RNs about their perspectives on issues and concerns related to dementia care in their nursing practice in small northern Saskatchewan communities.

The premise behind the theory is that all nurses do not begin their northern practice from a common set of personal or professional characteristics, nor do they all work in the same practice roles, or within communities with a homogenous set of health concerns. The proposed theory provides an understanding of the complexities involved in the perceptions of dementia by northern RNs. Overall more of the conditions identified were in the direction of insulating awareness rather than expanding awareness of dementia.

Figure 3.1 *Insulating and expanding awareness of dementia*



The following presentation of the findings is organized by the three theory categories. Within each category the conditions that were found to be insulating and expanding awareness are provided. Excerpts from the data are used to assist the reader with the understanding of the category and ground the theory in the data.

3.3 Dementia Care and Community Caregiving

Awareness of dementia as a clinical syndrome of interest for RNs grows as older adults in a community become affected by dementia and there is a resulting need for RNs to be involved in dementia caregiving within their practice. This awareness increases through exposure to formal dementia assessment and diagnosis, opportunities for education about dementia, and first hand caregiving experiences with older adults affected by dementia. Without exposure to *Dementia Assessment and Diagnosis, Dementia Education, and Community Caregiving*, northern RNs become distanced from an awareness of dementia as an element of their practice.

3.3.1 Dementia Assessment and Diagnosis

The responsibility for diagnosing dementia was perceived by the participants as the role of a physician. Participants viewed their nursing role in dementia assessment as the collection of subjective behavioral clues related to cognitive problems. Family members, clinic staff, and other paraprofessionals were most often cited as the informants who would bring behavioral concerns about an older adult to the attention of an RN who would refer the client on to a physician. Participants also perceived dementia as being more prevalent in

southern communities where older adults make up a larger proportion of a community's population.

3.3.1.1 Dementia Assessment

Participants perceived that the family was their only avenue to assessing the wellbeing of an older adult as most of the older adults did not speak English and were not often seen in clinics. However, the participants had conflicting perceptions about whether family members would bring their concerns forward. Some participants perceived that the family might not bring their concerns forward and may conceal troubling behaviors either out of respect for the older adult, or concern that a history of alcohol abuse might create feelings of shame. Others viewed the communities as very accepting of differences in behavior among all community members and therefore might not perceive changes in an older adult's behavior as troubling. Another participant stated that she really did not know how the community understood dementia. One Aboriginal RN explained that if something were viewed as wrong with an older adult, someone would bring this concern to the attention of the local clinic.

No, it would be something that would need to be restored. Like, any illness in the Cree culture is viewed as being off balance. So restoring them to a balanced state is what we would be looking at. Not, not a labeling them with the disease.

One other difficulty in the assessment of dementia, from the perspective of the participants, was that older adults might only be brought to a medical facility when a behavioral or medical crisis arose. This crisis would then alert the RN to build on their assessment to include changes in cognition.

3.3.1.2 Dementia Diagnosis

When asked about how often participants noted documentation of dementia as a clinical diagnosis one participant responded, “I’m trying to think how many patients in the north that I actually knew, had dementia? Never mind having it documented. . . . I don’t think I ever saw any documented.” Yet another suggested that there was “probably more [dementia] than we know,” because of their limited clinical interaction with older adults.

Although many participants had not often seen dementia used as a diagnosis in relation to older adults in the north, many of the participants could relate a story from their experiences in the north about an older adult who had dementia and lived in a community where they worked. However, a missing element in the participants’ perceptions of dementia was an understanding of aging and cognitive loss from the perspective of the community. Therefore, the limited amount of knowledge about the cultural meanings associated with dementia and aging in the north contributes to insulating the RNs’ awareness of dementia. Although this dialogue needs to happen, one participant perceived that, “They’re [the community] willing to teach you anything you want to know and they’re [the community] going to share their knowledge . . . So if you come as a nurse who’s willing to learn, then you will learn.”

3.3.1.3 Assessment Tools and Professional Resources

The limited amount of documentation of dementia seen by RNs in the north can also be attributed to the challenges they experienced in the use of assessment tools. Language and cultural barriers were perceived as limiting the use of standardized cognitive assessment tools, and specialty resources for assessment

were not always available in the north. The challenges associated with using the Mini Mental State Exam (MMSE) in assessment was explained by one participant in the following excerpt.

So in effect it's not a fair question. Like you asked ... What season is it now? And, they [interpreter] said, you know he wouldn't [think that way] ... I think in the end it was summer or something like that. But, I think what they [interpreter] meant is that his seasons would be different. Like he might have a season that would be moose hunting season . . . so when testing his cognitive ability it didn't really work for him.

Many of the participants stated that a mental health worker or psychologist was available to them to address mental health issues; however, they were not aware of whether the mental health workers had the ability to perform a MMSE and described the psychologists as “overloaded” with more acute mental health problems such as addiction, schizophrenia, or suicide. A few participants suggested that the lack of geriatric specialists in the province limited the availability of geriatric services in the north. Only four participants were aware of and used southern dementia assessment and geriatric assessment services. Other assessment challenges included participant concerns about professionals viewing memory loss as normal in older adults, and lack of awareness of newer pharmacological treatments.

3.3.2 Dementia Education

The participants did report a need for dementia education for northern professionals, family caregivers, and the community. The health care professionals who grew up in the communities were seen as pivotal members of the health care team, and were perceived by the participants as the most important link in developing an awareness of dementia in older adults in northern Saskatchewan.

The largest challenge in delivering dementia education was the regional structure of specialized educational programs.

3.3.2.1 Professional Education

Dementia education of the team of health care professionals can be seen as a strategy in broadening the scope of practice not only for the physician and the RN, but also for the LPN (Licensed Practice Nurse), CHR (Community Health Representative), and the community, in learning to care for older adults with dementia. The present lack of dementia education occurring in the north is insulating the RNs' awareness of dementia. Further, in informal conversations with CHRs and LPNs during the community visits it was found that compared to RNs they were more aware of older adults in the community with possible cognitive problems, but their limited training on dementia potentially prevented identification and communication of memory concerns to RNs or physicians. Therefore, education in dementia care aimed at the CHR or LPN may have a large benefit in bringing dementia to the awareness of all health care providers. One participant noted that the northern LPN program had just recently added more material on dementia to the curriculum.

The participants identified that LPNs and CHRs were more often in contact with older adults in the community than the RNs. Participants suggested that these two groups of health care providers would benefit the most from dementia education. Reasons given for focusing on LPNs and CHRs included descriptions of them as "community people" or from the community, where "they know the community," "they're in the homes," and "they see it first." In the smaller communities the participants stated that "The nurses traditionally are stuck in the

station” and in larger communities the RNs often were in acute care roles, which limited visiting clients in their homes. Therefore, the participants viewed the staff in the facilities, who were from the community, as an invaluable resource to increase their knowledge about the community and about their clients.

One participant perceived the Community Health Educator [CHE] in her facility as “a walking compass,” as this CHE was the RNs primary source for information about the community and it’s members. Most of the nurses viewed the LPNs, CHRs, and the staff in their facilities who were from the community as “part of the team,” and often stated that “There is no way that a nurse in the North is a nurse in the North without the rest of the team,” or “they’re a great link. I mean, without them, we’re lost. You know, really we are. ‘Cause, you know, [individual’s name] has nobody else’s interest at heart but the people she’s looking after, so that’s why. You can really trust her.”

3.3.2.2 Family and Community Education

Educating the family and the community increases the awareness of dementia as a health concern for older adults. Older adults with memory problems were perceived by the nurses as not brought to the clinics if deteriorating cognition was not viewed by family members as a situation that can be assisted by health care professionals. Increasing the family and community education on dementia would bring attention to memory concerns and hopefully result in earlier identification and treatment of cognitive problems.

One participant reported that, within a community, knowledge about aging and dementia was limited by the lack of educational material in Cree or Dené, and the low level of literacy of older adults in the north.

. . . people think that sometimes having one resource is going to work for everyone, I think that's oversimplifying. . . . I know there has been some success doing written Cree but Dené is a spoken language. So more people don't read Dené. So even if you print a resource in Dené and put it up here, people are going to look and say, "Well what does that say?" . . . up here in our community, we've got a tremendously supportive local radio. There is a scroll [announcements during the day], channel 8, and you can pick up on the scroll anytime and on the radio they will interview 100 people a day if they could, so if you want information getting out to the clients, you need to go and print off something very simple that can go on the scroll, like we do a health tip of the week, I do a health tip of the week that goes on, on whatever piques my interest that week, and I get them to read it over the radio. And if you really want people to know something, you go down and do an interview when they get either someone like CHR [Community Health Representative] to do the Dené component of it or the DJ will translate your basic information into Dené. And that gets to so much more people than having a pamphlet sent out.

This excerpt suggests the need for community-based education to be verbal to reach the largest portion of a northern community. Many of the participants suggested that very little education had been given to family caregivers and the community. Participants reported a need to increase family education, as families provided dementia caregiving. "And to my knowledge there has been no educational opportunities for families to learn how to deal with people at home but often because of the number of beds and things, that is how people are dealing with it." Another challenge in providing dementia education in a northern community included a lack of interest because there was either no one in the community with dementia or the community had little experience with older adults with dementia.

Another important challenge to providing community-based education was the limited length of stay of many RNs in northern communities. Participants reported that the longer an RN worked in a community, the more comfortable

people were in approaching the RN with health questions or concerns, which provided opportunities for informal education.

When I first moved here there were not a lot of people calling with questions because I think they have to know you. But, now that I'm here, I can't be away from my cell phone. People call a lot.

. . . because I've been here a fair amount of time now, . . . because they see you around and you stayed, I think they, you know, see a lot of bodies come and go and they sort of think well why should I invest in her. I mean she is only going to be here a year. So I find that that's better, you know, since I've been here longer.

Therefore, developing a relationship with the community over time increased the RNs' capacity to deliver health education.

3.3.2.3 Regional Education

The population of a community is a major indicator in the allocation of funding for health care services. Therefore, the addition of specialized health educators in the north has occurred on a regional level. These regional services are commonly based out of larger northern communities, providing services to smaller communities using rotating visits or on an "as needed basis." Participants described this method of addressing special needs in northern communities as a "band-aid solution." Specialists are parachuted into a community, and leave the communities without providing the training to continue services locally. Some participants' viewed the delivery of services on an "as-needed" basis as a trend in northern health care, and one that perpetuated the distance between northern and southern health care services.

The need for onsite professional education was centered on the treatment of dementia as well as understanding and using behavioral management techniques. One participant in a northern hospital indicated that a local resource

for dementia behavioral management would be beneficial, as the north does not have a secure special care unit to accommodate dementia clients with wandering behaviors. This participant stated that since they had limited dementia care resources, health care providers put forth a lot of effort to manage disruptive behaviors in LTC, which resulted in an outward perception that more resources were not needed.

The present access to resources for dementia care management was viewed as occurring on an “as-needed” basis through networking with southern colleagues and specialists. Professional education that came north over telehealth was viewed as positive. Telehealth programs providing dementia education had been taped and then viewed by staff when time permitted. One concern for education that was delivered by telehealth was that very little was focused specifically on the north.

Sometimes I think it would be really nice if we had more northern people. . . they always try to lump northern and rural together, and we have a lot more similarities than we do to a lot of urban centres, except that, I think for us and the inner-city there is a lot of comparison there, but, what goes on in [southern town] is pretty different from what goes on in [a northern community] . . . having more northern content would be beneficial . . .

Participants commented on several challenges to continuing education, including heavy workloads, which prevented access to education. Although all the participants identified that they needed more information about dementia and the aging process, one participant explained that the difficulty in increasing her interests involved prioritizing her educational opportunities where “need to know” and not “nice to know” motivated her choices. Consequently, some participants felt that information about dementia and the care of dementia clients would be

more pertinent if offered at a time when they were actually taking care of someone with dementia.

3.3.3 *Community Caregiving*

The participants perceived that the families, as a natural consequence of their remote location, cultural value of respect for elders, and limited financial resources, had historically provided dementia care to older adults in the northern communities. Participants remarked that similar to life in the south, families are the primary caregivers for older adults in their communities. Of the community residing elders that the RNs were aware of with dementia, families were the primary caregivers.

3.3.3.1 *Family Caregiving*

The participants believed that there was a cultural expectation for families to care for their elders in the community and that “people are still ashamed of family having to ask for help when they’ve got a family member with dementia.” However, as one participant remarked, family caregiving was viewed as different in the north, where the community was seen as one large family.

They’re just one great big family so when a community gets affected by a death or a community member that is sick, it impacts a large part of the community as opposed to how we are in the south where we have our tiny little neat families and somebody is sick in that family – yes there is a feel, you know, the rest of the family will feel it but not to the extent that we see grief and things happening in the north because that family is not a nuclear family. It’s this huge group of people who are affected very strongly by what happens with one person. But they all come together to help that one person. I think that support is actually very, very good up here because they’re [families are] huge.

3.3.3.2 Family Support

The participants viewed the strong family support as a benefit to older adults with dementia, as the care for an elder was not seen as becoming the responsibility of only one individual, thus decreasing the potential for burnout and exhaustion. In contrast, this large support system was also seen as a concern for the health status of an older adult, as dementia may not be brought to the attention of health care providers in the early stages.

Because of the high level of unemployment and the traditional communal lifestyle, families in the north were perceived as not “distracted by careers and all this other stuff. [In the north], part of their life is just to, to live through it and take care of people along the way. And take care of your own.” However, participants observed that the younger generation were becoming more educated and having careers, which would leave fewer people to care for older adults.

They are more mobile now so it’s harder for families to care for people. In this community, with the [LTC facility], it would be a lot easier to keep them at home [home referring to the home community] because they have a facility to look after them.

3.3.3.3 Institutional Care

Not every community in the north has a LTC facility or assisted care facility to care for older adults when their needs become too great for them to be cared for by families. Older adults in need of care in a LTC facility, or respite care, often have to be placed in a facility a considerable distance away from their home community. Some of the participants knew of older adults who had been moved to communities other than their own, in the north and in the south of the province, to be placed in LTC. Knowledge of these displaced older adults was greater for RNs

who had spent more time in their work community, or when RNs were working in newer northern services areas such as LTC or home care.

Many issues and concerns surround LTC in the north. Participants viewed placement in a LTC facility as difficult for the families and the community, especially when this involved separation from an elder. Challenges included travel costs associated with visiting their relative, southern locations having fewer Cree or Dené speaking staff to interact with an older adult, and lack of familiarity with institutionalized care for elders. LTC placement in one community in the north was viewed as difficult because admission for the few beds available depended on priority of needs, most often medical needs, and not on time waiting for admission. In communities with LTC facilities, many of the RNs participating in the study were not aware of the cognitive status or diagnoses of the residents in LTC. Thus, insulating conditions that decreased awareness of dementia included the limited interaction with LTC residents, as well as personal characteristics of the nurse such as the inability to speak Cree or Dené.

In summary, the study identified a number of conditions that affected the RNs' awareness of older adults with dementia. Few participants had experience with assessment and diagnosis of dementia, dementia education, or in providing care to older adults with dementia. The key concerns for expanding an awareness of dementia were: 1) the growing number of older adults in the north, 2) the need for improved dementia education of health care providers including the CHRs and LPNs and, 3) the need for greater involvement by community members in the identification of older adults with memory problems in the community so that the individuals can be brought to the awareness of physicians and registered nurses.

3.4 The Individual Characteristics of the RN

Individual characteristics that each RN brings to their practice, both personal and professional qualities, influenced their awareness of dementia. These characteristics were: *Comfort Living in a Northern Community*, *Prior Nursing Experience*, and the *Challenges in Communication* when they did not speak the language of the community.

3.4.1 *Comfort Living in a Northern Community*

The level of comfort of the nurses living in a northern community influenced their awareness of dementia. There were two conditions that contributed to this level of comfort, community integration and social isolation. Community integration can be defined as the nurses' level of comfort interacting socially in their community (e.g., going out for tea). Social isolation can be defined as the nurses' level of comfort with their professional status that controlled their actions in the community, in part related to their lack of anonymity. Achieving a personal and professional balance between community integration and social isolation contributed to their level of comfort in a northern community.

3.4.1.1 *Community Integration*

The size of the participants' community of origin influenced their sense of comfort working in a small community. Participants who grew up in a small community viewed themselves as more comfortable in a small northern community because they believed that they had the ability to understand the community dynamics of small town living. Participants who grew up in a small Aboriginal community, and had an Aboriginal heritage, described their work community as "It feels like home," and were more apt to be participating in social

interactions within their facilities and in the community. Community participation was also found to increase involvement with older adults and an awareness of dementia.

3.4.1.2 Social Isolation

In contrast, not all of the participants had a small town as their community of origin or viewed their small town background as assisting in their ability to become part of the community. Some of the participants described the position of a nurse in the community, regardless of their orientation to small town living, as inherently containing an element of social isolation from the community. These nurses perceived that the community expected the RN to be ‘a nurse’ in all of their social interactions and that this created a feeling of separateness from the community. However, being separate from the community was viewed as a necessity and functioned to maintain the credibility of health care providers.

There’s a certain amount of social isolation that goes with northern nursing in order to be treated with respect. . . . There has to be a certain amount of isolation. The more they know about you, the more critical they become of you, and, so the hard part of working in the North is that you do have to socially isolate yourself . . . If they feel you’re a professional, they’ll respect you.

This view of the nurse as separate from the community distanced the RN from developing relationships with community members. When the participants described the community as separate or distant from themselves, they were more apt to describe elders as “forgotten” or “overlooked” and to perceive their knowledge of dementia and the occurrence of interactions with older adults as limited.

Social isolation also refers to the decreased social and familial interactions nurses have in small northern communities. Participants in this study were challenged by at least one of the following three factors: 1) a northern community was not their community of origin, 2) they had no experience living in a northern community in a non-professional role to become familiar with the community and the culture, and 3) they most often did not have family members or significant others living with them in the community where they were employed. Social isolation can then be viewed as a consequence of both their choice to relocate to a northern community and the maintenance of their professional status.

3.4.2 Prior Nursing Experience

3.4.2.1 Acute or Critical Care

Prior nursing experience in acute or critical care areas was seen as necessary for working in the north. One participant described the odds of getting a job in the north with only long term care nursing experience as “pretty slim.” This participant identified that RNs working in the north did not have “a good picture of long-term care” and reported that most northern nurses did not have “any recent training” in dementia and did not want “anything to do with it [LTC].”

The participants assessment of the acute care nursing practice experience needed to work in the north were also tempered by the knowledge that there were a limited number of positions available for RNs with LTC or home care experience. One participant employed in home care commented that she was unable to get a job in primary care because “I didn’t have the current emergency experience.” Home care positions were “just now” increasing in the north and the

care of older adults with dementia was perceived as belonging to the domain of nurses in Home Care or LTC positions.

Participants suggested that acute care and primary care nurses “wouldn’t have had that formal training, but they certainly would gather that experience if it [dementia] starts to grow with the elder population.” However, the perception of the need for acute care nurses and acute care skills was also seen as based in the perception of northern nurses as a physician replacement. “I delivered a baby here and it was actually just a great experience to do that, but that’s kind of like what we expect nurses to be.” This perception of the role of northern nurses as only providers of acute care services was a prominent insulating condition for the limited awareness of dementia in northern nursing practice.

3.4.2.2 LTC or Home Care

Whereas nursing experience in acute and critical care roles was categorized as insulating the RNs’ awareness of dementia, prior nursing experience in a LTC or home care position was categorized as expanding the RNs’ awareness of dementia that increased the RNs’ knowledge base about the dementia associated with the older adult population. RNs with more recent experience in LTC or home care, versus acute care hospital experience, were more aware of the need for ongoing monitoring of cognitive function and behavioral changes in older adults.

Participants who were involved with LTC and home care perceived that the population of older adults was increasing in the north. These participants reported that this increase in the number of older adults would lead to an increase in their management of chronic diseases and present an increased potential for dementia care services to play a role in clinical practice.

. . . because the life style in the North is changing and people are living longer and so we will see the trend change in the North as it has in the south. We will actually see more people living longer but more of the same health issues that we've had in the past because as they grow older, we're going to get a lot more heart failure, we're going to get a lot more cases of hypertension, and we're certainly seeing an increase in diabetes. It continues to evolve as they [the population] grow older. So, I think we will actually see more dementia in the north.

Participants with a recent work history that included LTC or community home care came to their northern positions from a different perspective than participants with a strong acute care background. These participants perceived that part of their role was the development of a relationship with the community versus an acute care focus on the development of clinical nursing skills. One participant hired into a home care position stated that when she started her position she “made a real big effort to be friendly . . . met people where they're at and . . . I just went around and offered my hand and said, you know, I'm [name].” Another participant, who began her career in LTC as an LPN, felt that it was important to begin her nursing practice in each northern community she worked in with an emphasis on developing relationships with the community elders.

If you want to get to know a community you have to get to know the Elders first. Pay attention to your Elders and you'll win your way in to a community. Whereas, if you don't talk to the Elders then you're just one of those nurses up in the stations.

The participants who came to northern nursing practice with work experience in LTC, community home care, or public health with an emphasis on building relationships had more interaction with community members. A participant employed in home care saw her role as a liaison between the RNs in the nursing station and the community as she followed clients in the community to help manage chronic illnesses and provide ongoing treatments. A participant with

prior LTC experience currently working in a nursing station had developed a program that provided a means for gathering the older adults in the community at the health centre. This program became a social event by which the RN could monitor the health and cognition of the older adults while remaining within the health care facility. Further, the older adult program also became an avenue used by the RN to engage the older adult members of the community in a dialogue where by the nurse could gain knowledge of the community and the older adult could gain information about self-care practices, as “not everybody is totally receptive to home care.”

3.4.2.3 Primary Health Care

RNs with previous work experience in primary health care were more comfortable broadening services into the community. One RN who had a history of administration with a primary health care focus used this knowledge to engage the community in dialogue. In collaboration with the community administration a local radio show was created that presented health information and answered questions from callers in the community. This dialogue served to improve community members’ understanding of self-care and health promotion, and created an understanding of the role of the nurse in the community.

But what we’ve done in the last two years is to spend a lot of time teaching about primary health care here and what that entails, and basically what your responsibility is as a client. And so we’ve actually spent a lot of time educating on radio. In fact we do two radio shows a week . . . after hours we usually sort of talk to them about whether or not they consider it to be an urgent or an emergency situation and usually they talk us through it. . . . People out there are receptive to education. You sort of talk it through and explain to them what is considered the nurses’ situation . . . I’ll come back with somebody who has a tooth ache, for instance. You wouldn’t go to Emergency in Saskatoon on Tuesday after hours. But here in the North, my personal feeling about it is, here in the North the nurses have somehow disempowered the individuals and

created amazing dependence on the health care system. My belief, my personal belief, is to re-empower them; give them back the responsibility for their own health. . . . And people have been very, very receptive.

Therefore, a primary health care model with a health education focus increased the participant's knowledge of the community and the community's knowledge of health care. Although this nurse was comfortable taking a "proactive" approach and educating the community in a public venue, "Not all nurses are receptive to become a part of it and some of that is just a little bit, shall we say camera shy."

Most of the participants came to their northern positions with diverse nursing practice backgrounds. Prior nursing experience in areas other than acute care provided an advantage to nursing practice in the north, contributing to a broader awareness of the care needs on a community. RNs with primary health care, home care, or LTC experience were more likely to develop a broader focus on the community's care needs.

3.4.3 Challenges in Communication

The most commonly observed insulating property in relation to the individual characteristics of the participants, that affected their ability to broaden their scope of practice, was the language barrier. Of the RNs who participated in this study, 11 were not Aboriginal, and 12 did not speak an Aboriginal language. All of the participants agreed that "there are things that don't translate," that "the process [of providing care] would be easier and you probably would learn more and recognize the greater need," if the RN and the client spoke the same language. One participant who did not speak Cree or Dené explained that, "a nurse with the language is going to be able to take care of that person 100 percent better than I am."

3.4.3.1 Lost in Translation

The participants identified issues in translation as involving both the inability to know whether a client understood a conversation in English, and the use of translators. One participant explained the challenges in conversing in English in the following excerpt.

Another thing with the Dené culture is people will nod and grin and say, “Yes I get it,” and they’ll leave and you’ll find out based on the reaction they’ve had with family or someone else that, no, they didn’t understand what you were saying. And, so, I think, and it happens between any two languages, there are things that just don’t cross over and so, when you’re experiencing that, you just can’t guarantee that they are grasping or that you are grasping what they’re attempting to say.

This excerpt suggests that the inability to speak the community language has an effect on how information is interpreted by both the nurse and the client.

All participants reported that the language barrier was a challenge in the delivery of care. One participant stated that the language barrier was something she “didn’t really anticipate” when she came to the north. Thirteen of the participants, who had been in the north for more than two years, stated that they felt they had worked with the community and translators for so long that they had developed a comfort level in the use of translators so that communicating through a “third party” no longer had a large effect on their practice. Most of the participants realized that there was a need for the community to maintain their language as the following excerpt illustrates.

English isn’t their first language, who are we to impose it on them and why should they have to practice it for us when they can get along with the rest of the community without knowing English. So... a lot of people come in and say, “Well it would be so much easier if they spoke English” and you think well, in a lot of ways, then they would be losing more of their culture. . . . But it is, there are huge frustrations communication wise.

For the one participant for whom the language of the community was her first language, the ability to speak to clients about their health concerns in the same language was stated as the best part of her job. Most of the participants suggested that RNs who could speak the language of the community would be an asset in delivering health education. However, speaking the language of the community could also become a frustration for an RN. In some communities where an RN spoke Cree or Dené, there were times when they felt over-extended in their role as they were often used to translate for other health professionals.

Time in the north increased the RNs' ability to work with the challenges in communication. However, the participants identified that the language barrier would have the potential to limit their ability to become aware of dementia because it limited their social conversations with older adults. All of the participants reported that the older adults in their communities spoke little to no English. Therefore, the primary avenue for assessment of cognition was through a translator. Challenges reported in translation included the ability to find a translator and concerns about the quality of translation. Translation in dementia assessment was seen as further complicated by a cultural norm where the translator may not relate information that is perceived as negative about an elder "out of respect for the elder."

3.4.3.2 No Word for Dementia

Complicating the issues surrounding language and translation was the nature of the two Aboriginal languages. Both languages were described as descriptive and neither contained a word for dementia.

Cree is a descriptive language, so there is no such word that I know of that refers to dementia but you describe how the person is acting, and from that you can infer that they are going through something like that. Because Cree is a very descriptive language, so you would describe it as maybe a person who isn't doing normal things. Like, say you have a person voiding in an ashtray rather than the toilet so the description would be that there is something wrong with him because he is peeing in an ashtray rather instead of the bathroom. Like, and he's not right. . . . So that would be the description. He's not acting as he should.

As the above quotation suggests, behavioral descriptions would be an indicator of concern regarding cognition in older adults. However, the limited contact with older adults, combined with the challenges in translation, distances the RN from observing behavior.

In summary, participants' personal characteristics may have the effect of insulating or extending an awareness of dementia within nursing practice. The RNs' ability to broaden their practice into the community and to become aware of dementia in older adults was influenced by their comfort in living in a northern community, and prior nursing experience, especially in LTC, home care, or primary health care. One of the largest challenges for the RNs in developing an awareness of dementia was communicating across the languages of Cree, Dené, and English.

3.5 Northern Nursing Worklife

The category "Northern Nursing Worklife," includes conditions related to the *Workplace as an Island*, *Perceptions on Professional Isolation*, and *The Characteristics of Nursing Practice Roles*. The conditions related to the nursing work setting were found to have a large influence on the RNs' awareness of dementia. The characteristics of nursing practice roles and professional isolation experienced by nurses also influenced the participants' awareness of dementia.

3.5.1 Workplace as an Island

Many health care facilities inside small northern communities can be conceptualized as islands within the community. The flow of interaction between community members and RNs is on an as-needed basis as the clients come and go from the health centers. The nurses inside the health centers often have limited interaction outside of their island with the people of the community. Interaction with the community is then constrained by the RNs' practice occurring inside a facility, further insulating the RNs' from an awareness of older adults with dementia. If the RN interacts in a limited capacity within the community then their awareness of an older adult with dementia is limited unless an older adult has acute or chronic care needs.

3.5.1.1 "What is coming through the door."

Some participants observed that RNs in busy acute care treatment facilities can develop a limited perspective on the needs of older adults in northern communities based on "what is coming through the door." What comes through the door was sometimes viewed as a reflection of what is going on in the community. Since older adults were seen in the clinic on a limited basis, and since there were few communities where services for older adults were available, an awareness of older adults was not always present in an RN's everyday practice. This commonly resulted in the perception of older adult health concerns as a lower priority. Focusing on the acute health concerns presented by clinic patients distanced the nurses' from developing an awareness of older adults and dementia.

The current use of itinerant or term RN staffing also contributed to focusing primarily on acute care practice. Staffing has long been problematic in

northern health care facilities. Participants reported that permanent RNs increase the continuity of care and increase the knowledge of the community acquired by nurses. Itinerant RNs were seen as having a limited degree of commitment to their work, as the length of time spent in the communities was typically short (e.g., days to a few months), which made continuity and extension of programming difficult. One participant commented on the level of turnover in the northern facility as, “grave conditions - there are 20 people and out of those, there have been 20 changes in three years.” The participants noted that although turnover and itinerant RNs created problematic conditions for continuity of care and program development, the length of time in a community did not always equate to an increase in commitment or awareness of the need for change.

3.5.1.2 “Trauma and drama”

Another reason for the preoccupation with “what is coming through the door” was the urgent nature of acute care needs.

We’ll always see sick kids, sick Elders, palliative care patients. We get called to the [facility], we get called to home visits, we get called to the police station, you know, to deal with trauma and drama, and then, we share calls through the evenings, so...we put in a blistering day here and then you can be on-call for the night too. . . . Dementia and trauma? ... You know I think there’s, there’s lots to be said for, for those patients. Having a good quality of life, like I think of this poor old lady not hanging around down by the river and being safe and not burning her house down with the grandchildren in it, like I mean, those are very very important things, but, those things get sort of swept aside while you’re stitching somebody’s head up, you know.

Along with the “trauma and drama” other health care issues that were categorized as conditions that were insulating awareness of dementia included the perception of public health programming as “taking a back seat to acute care treatment.” Participants viewed the prioritizing of acute care over health promotion as an

enduring struggle for nurses in smaller northern communities. All of the participants agreed that the need for health education was necessary to increase the health status of the people in northern communities, but the “trauma and drama” controlled the organization of their work. One participant, however, observed that although the urgent acute care needs preoccupied the organization of the RNs’ work, she felt that, “there’s always an excuse not to participate in things because ‘We’re too busy.’ We use that a lot.”

Because of the difficulties with staffing, amount of over-time worked, and the social issues that they responded to, it was difficult not to become focused on the “drama and trauma.” One participant explained her perspective about why nurses focus on “drama and trauma” using the following metaphor.

If you’ve got to paint your house, you’ve got to make sure it’s primed first. We, we’re not primed people, we just want to paint. We just want to put paint on the door. We don’t want to repair anything, we just want to go out and paint. And then it will look good, but the paint is not going to stay on for very long because we didn’t prime.

This participant used “we just want to paint” as a metaphor to describe how northern nurses, and other health care providers, focus on resolving acute health problems but are not “priming” or providing the primary health care education to create ongoing programs that, over time, would limit or prevent the occurrence of acute health problems or emergencies. The reason for this focus on treatment can be seen in some of the responses to questioning about the best part of their job. Participants expressed that “watching them [clients] get well,” and the “autonomy” allowed in their practice to treat patients medically was a large factor in their job satisfaction.

The job satisfaction gained through the autonomy in the participants' practice provided positive reinforcement for the RNs to focus on the needs of the younger population and the delivery of acute care services. Since older adults make up a small portion of the population and are seen rarely in the health care clinics, some participants felt that they adequately captured this segment of the population in the chronic care programs or through home care services. However, not all participants viewed these services as servicing all older adults, because the programs were primarily focused on the care of individuals with chronic illnesses. The chronic care programs were based on "a medical point of view" and included everyone, young and old, who had a chronic illness such as diabetes, heart disease or hypertension. The program had a very limited focus on the assessment of cognitive status. Therefore, the medically stable or well older adult was seen as falling "between home care and the chronic program."

3.5.2 Perceptions on Professional Isolation

Professional isolation influenced the RNs' awareness of dementia. The term isolation implies that the RNs are detached or restricted from communicating with other professionals. Limited contact between northern nurses and other northern and southern health care professionals on an on-going basis can lead to professional isolation. Present advances in communication technology, such as telehealth, were described as assisting to increase the repertoire of northern health care services and change the perception of northern nursing practice as synonymous with an isolated practice setting. One of the participants interviewed by telehealth stated;

It's still remote, because we are still a distance away, and we still have to wait for a plane to come in to get emergency health care so that makes us remote, but in terms of being isolated, we're not. You and I are sitting here, you in Saskatoon, and I'm living in [northern community name] we're looking at each other right now and talking to each other so we're not isolated. Our technology is the same in the North as it is in the South. We use satellite phones, we use two-way radios around the town, but . . . we don't have cell service so in that way we're a little bit isolated, but we have cable and TV, and high speed internet here, so we're, in essence I call it research and we, you know like everybody else we Google everything. We get to a point we don't know what it is and we're in a hurry; we're not going back to the books because sometimes the books aren't as current as Google, so we Google it and come up with, you know, what we think might be the right decision sort of thing. We don't do that alone. We still have, our physicians are only a phone call away as well, and we do have telehealth with our physicians if we need to, and digital cameras. We can actually take a really good picture and send it off, and have somebody down South tells us exactly what they think it will be. So . . . with the technology we're not really isolated.

The reduction in the perception of northern nursing practice as isolated was observed in the community visits. RNs had daily interactions with other RNs and other health care professionals. Some of the communities employed emergency medical technicians, most employed LPNs, and all had either daily to weekly services from a physician. None of the RNs worked alone as the only health care provider in a community and all had access to communication devices such as the telephone and internet, and over half had telehealth access in their workplace.

Data analysis identified a number of conditions that were insulating the RN from an awareness of dementia and insulating their interaction with the larger provincial community of health care professionals who focus on the care of older adults. Viewing the nature of the RN role in the north as insulating the awareness of dementia is rooted in observations in the practice setting where increased access to health care services and urban resources is improving, however, elements of nursing practice, such as workload, limit the use of these services to broaden their

practice and facilitate collaboration with other health care professionals. For example, one participant reported that telehealth was a very useful tool for continuing education, but the sessions need to be video-taped as few RNs could attend the live presentations. Therefore, professional isolation contributes to insulating the awareness of dementia because although the means to communicate and acquire knowledge and skills about dementia are present (e.g., telehealth education), not all the participants perceived they had the opportunity, because of clinical demands, to take part in educational programming or increase their use of new technology in their practice.

It's here, it's available, we want them to use it but some of them [RNs] are more apt to use it than others and some of these are very keen on technology and will be more apt to use it. And those that are struggling with the technology are a little bit starting to get on board with it so we see the change is coming. You know, if you look around and see surgeons and physicians that's been in the North for over 30 years, using Ipods, then you know it's coming, it's coming, so it's just a slow process, you know, because we don't have the same number of resources here, that we need in health care. . . . I think it's a matter of easing into the technology as opposed to sort of imposing it and that's what I think that's what is actually happening here is that it's here, we talk about it. For those that are more likely to use it, they use it; for those that are a little more, a little shy are to use everything, we talk about it. And that's as far as we're going to get for a little while.

For this participant technology provided a means to decrease isolation. However, not all RNs had a comfort level with technology or had incorporated the use of technologies into their practice. The lack of integration of technology can be viewed as contributing to maintaining the distanced status of their practice environments.

3.5.3 Characteristics of Nursing Practice Roles

Nursing practice in the north can be viewed as made up of a set of mandated functions or tasks within each of the varied nursing positions available within northern health care services. Although their tasks were diverse, from acute care and nurse practitioners to public health and home care positions, RNs in similar positions provide a similar set of mandated tasks. It was the contrast between the mandated tasks and autonomy, and comments about the demands of acute care services, and the need for more health education, that contributed to the initial formation of the concepts of insulating and expanding. Mandated tasks were perceived as insulating the RNs' awareness of dementia by limiting the RNs' ability to increase their role in a small community.

3.5.3.1 Acute Care

Acute care practice in nursing stations was described as “a free for all,” “demanding” and “sort of like minor emergency clinic.” Acute care supervisors in nursing stations and hospitals spent most of their day “organizing,” “touching base” and in meetings to enable the continued functioning of acute care services. The Nurse Practitioners (NPs) in the hospitals and the RNs in the nursing stations were each assigned a program aimed at monitoring the health of different populations, such as the prenatal or chronic care programs, which focused on the medical care required for the health of the client group.

3.5.3.2 Public Health

Public health nurses had a maternal-child and communicable disease focus to their practice. In the north as in the south, public health nurses provide influenza immunization clinics in the fall. It is during this time of year that public health

focuses on older adults in their immunization campaigns. In one community the public health nurse used the influenza program to access older adults and check on their health status. This participant commented that through this program, a few older adults were identified each year that were referred for acute care issues or follow up care. This program was this RN's only formal access to older adults within her community. However, not every older adult in the community consented to receiving an influenza vaccine, which decreased access to all older adults.

Public health RN participants commented that although the acute care nurses were "very busy," their own practice was no less challenging. "The morning is not a good time for client interaction. ... Paper work usually is my mornings. And then in the afternoon is usually when home visits and interactions take place." Most participants, including the RNs in nursing stations, viewed the organization of their work as somewhat "routine."

3.5.3.3 Home Care

Home care nurses had the greatest access to older adults in the communities. Communities where nursing practice included home care nursing positions contributed to expanding an awareness of older adults with dementia. In completing assessments for home care services these home care RNs were able to spend time in their clients' homes. Home care nurses also worked with a team of home health aides. The collaboration on health care issues between the home care nurse and the health aides increased the ability of the nurse to gain knowledge of the community members and their health status. However, not all older adults participated in the home care program.

3.5.3.4 Broadening the Scope of Practice

Broadening the scope of practice assists in expanding the RNs' awareness to include a focus on older adults and their health care needs. As noted earlier, one of the participants had created a program for older adults in the community. This RN, who had LTC and primary health care experience, viewed northern nursing practice as based in relationship building and the principles of primary health care. This participant worked with the community administration to create an adult daycare program. The creation of the foot care and adult daycare programs were developed through dialogue with the community, and were owned by the community through community participation in program development.

The need to increase the number of programs for older adults in this community was based on the perception that not all older adults would be comfortable accessing certain programs so that a variety in programs would increase participation of a larger portion of the older adult population. Adult day care programming was also presented by this participant, in the following excerpt, as a means of broadening the scope of nursing practice to address older adult health in a proactive way.

. . . the purpose of that is so we can actually get a handle on what is actually happening in their lives. We can do an assessment on them every day and we can make sure they're taking their medication. . . . It is the next step including an adult day care program. My thinking about that is that just because we see a trend that's changing in the North the same as it is in the South. We see more and more people becoming employed and as they become employed then we see much more restraint in elder care and like anywhere we're going to actually see a certain amount of elder abuse in the North, the same as we do in the South . . . We like to do the same program here as you have in Saskatoon. . . . we don't have that many cognitive impaired people here but we're going to. We're going to as the population grows. So I think this is the way to do things. So that we'll start off with elder care, basically we'll start off with the adult program bring

them in socially but that will be the opportunity to see the changes in them, and then be able to monitor that closer and we can do something about it before it actually gets out of hand. So I think this is just being proactive, as opposed to sort of leaving it alone and waiting until it happens. We're just being a little proactive.

Each different nursing practice specialty in the communities can be viewed as contributing to the health of older adults by providing a service such as the influenza clinic, chronic care program, programs for the older adult, and home care. Some participants in this study incorporated the use of social gatherings and food to make services enjoyable, and used local resources like the radio station to make the services accessible to the community. Providing older adults with the opportunity to socialize while accessing services encouraged participation and made the program successful.

The participants perceived that the success of programs and services aimed at increasing the health of the community were influenced by the community's interest and involvement in a program. Participants expressed that, "They have to buy into it or it won't work." They also commented that as nurses they felt a responsibility to provide community programs as, "there is no one else to do it." One participant described the RNs' role in providing services in the following way.

You know you come in as an educator, and you educate as they're prepared, you know not to impose anything but to be there, be willing and to be open to any kind of suggestions they might have, because anything that I have done in this community has come from them [the community].

Educating and working with the community to create services has not always been the route RNs have taken to attempt changes in the organization of their practice. One participant identified the institution of booked appointments in

a clinic as a method of freeing up time for health education and program development. However, the community was not receptive and the appointment system reverted back to a walk-in arrangement. Analysis of the Cree view of illness as being out of balance was suggested as the reason for the persistence of the walk-in clinic and the perception that if an older adult was not behaving as they should the RNs would be informed. “They don’t wait. That’s why we’re busy! They don’t try to handle it, like, I think we’d know pretty fast [about memory loss].” However, RNs vary in their ability to connect the culture of the community to the delivery of health care services.

Broadening the scope of practice to include community education and services focused on the older adult population contributes to an expanded awareness of dementia. Home care practice roles had the most potential to increase the RNs’ awareness of an older adults cognitive status. Increasing opportunities for interaction between RNs and older adults community members further increased the focus on the development of health care services for this segment of the population.

3.5.3.5 Relationship with the Community

The length of time spent in a community, or in the north, did appear to have a bearing on the participants’ relationship with the community, and what they valued as the best part of their job. Their perceptions of the best part of their job included, “meeting the people,” “relationships you build,” “providing services where you can,” “when you can make them feel confident in themselves,” and “cultural understanding and appreciation.” One nurse summed up the best part of her career in the following way.

The best part of my nursing career has been in the north. And the reason being, it's been ____ years since I've been in some communities but they still call and talk to me. And the best part of that was, I was there when they were having trouble getting pregnant. I was there through their pregnancy. I was there maybe for their delivery but I was then there and helped them, you know, with the immunizations, pre-school. Then I was there when they were going to school. Then I had the opportunity to see them, the children, grow. So the best part of the nursing was, it's back to that old family physician thing. A trust and a respect, that I haven't found anywhere else in my nursing career that there is a crossing of cultural paths and a respect for each other's background and experiences. And that there's a trust and respect that what we brought to the table was shared, and that it benefited both. The biggest thing was that I was always taken care of as a nurse in the north. And respected and trusted and valued. But most, mostly that I was, to me it was a privilege that they allowed me into their homes and their hearts. Where I have never experienced this anywhere else.

The results of this study indicate a willingness to broaden services to meet the needs of the older adult population. However, awareness of the need for services for older adults is only beginning. The addition of services beyond acute care, such as home care, and the addition of RNs who have LTC and Home Care experience, is gradually increasing the exposure of RNs to older adults in the community. The community based participants (i.e., versus the acute care facility based RNs) recognized the need to acknowledge the cultural differences between RNs and the community in order to broaden nursing practice to a level that provides opportunities to increase their attention to the needs of older adults and their awareness of dementia.

3.6 Summary

The study findings indicate that northern RNs have limited caregiving experience with older adults affected by dementia, and that there are limited resources for older adults with dementia in the north. Home care service, although available in all communities, was not always delivered by RNs. LTC facilities

were present in few communities in the north, however these facilities are a regional versus a community resource for care. Participants reported that services for older adults are a missing element in northern health care. Further, the analysis suggests that services for all stages of dementia care are limited in northern Saskatchewan. The theory, *Insulating and Expanding the Awareness of Dementia in Northern Nursing Practice*, provided a conceptualization of the factors influencing the RNs' awareness of dementia in northern Saskatchewan.

4 CHAPTER FOUR – QUANTITATIVE METHOD

Glaser and Strauss (1967), the originators of the grounded theory method, stated that many types of data could be used in the development of theory including analyses of quantitative data. In the present study a secondary analysis was conducted using data from a survey (Stewart et al., 2005) that was one of four methods used in the study, “The Nature of Nursing Practice in Rural and Remote Canada” (MacLeod et al., 2004). A secondary analysis of the national survey data was relevant to this project as it provided a theoretical sample population of northern Canadian RNs who could contribute contextual data to an exploration of dementia care in northern Canada.

The method for the descriptive analysis involved a theoretical exploration of the categories from the theory, *Insulating and Expanding the Awareness of Dementia in Northern Nursing*, in the questions contained in the survey questionnaire. Survey questions were selected if the responses could provide additional explanations for properties within a category, thereby broadening the description of the relationship between northern nursing practice and northern dementia care. This presentation of the method for the secondary analysis of the survey data describes the national survey, the sub-sample chosen for the secondary analysis, and the survey questions that were identified as relevant to the theory.

4.1 The Nature of Nursing Practice in Rural and Remote Canada Survey

4.1.1 National Survey Design

The survey was designed to increase the amount of empirical knowledge available about rural and remote nursing practice in Canada. Demographics, nursing practice, organization of the work, and the context of the communities where the nurses were working were some of the areas of focus in the mailed questionnaire for the national survey (Stewart et al., 2005). The resulting large data set of variables on nursing practice in rural and remote Canada made the survey data a relevant source of contextual information that could contribute to broadening an understanding of the categories, conditions, and hypotheses identified in the theory on northern dementia care.

Although many definitions of rural can be found in the literature, du Plessis, Beshiri, Bollman and Clemenson (2001) recommended defining rural and small town communities as those outside the commuting distance of a centre with a population of 10,000 or more (Mendelson & Bollman, 1998). The stratified random sampling design for the survey was created to acquire a representative sample of rural RNs within each province using this definition (Stewart et al., 2005). The sample of RNs within each province was selected, from the provincial nursing associations databases, by matching rural postal codes to the postal code of residence reported by nurses on provincial nursing registration forms. The sampling design also included all RNs who indicated on their registration forms that an outpost nursing station or nurse clinic was their place of employment, as well as all RNs who worked in the three northern territories. The sampling design had the potential to capture RNs residing in urban centres, but working in rural or

remote communities, and RNs living in rural or remote communities, but working in urban centres, therefore the national survey participants were given the opportunity to identify the population of their home and work communities from under 200 people to over 75,000.

The provincial and territorial nursing associations assisted with the creation of a randomized sample and the mail out of questionnaires using the Dillman (2000) Tailored Design Method. This method includes personalization and a persistent 3-stage mail out to encourage respondents to return the questionnaire. The questionnaires were mailed to: 1) a random sample of rural nurses, stratified by province to meet urban-to-rural RN ratios within each province, 2) all nurses in the territories, and 3) all nurses indicating employment in an outpost setting on their provincial registration forms. Data collection occurred in 2001-2002. Stewart et al. (2005) found that the sampling design resulted in a data set representative of the national data on RNs in rural and small towns in Canada (Canadian Institute for Health Information [CIHI], 2002). The final sample consisted of 3933 completed questionnaires, resulting in a response rate of 68%. Applying the definition of rural and small town communities (Mendelson & Bollman, 1998) to the national survey database resulted in a sample of 2951 participants who worked in a rural community.

4.1.2 Instrument

The instrument for the quantitative aspect of the present study was the questionnaire developed in both official languages for the national survey component of the multi-method study, “The Nature of Nursing Practice in Rural and Remote Canada” (MacLeod et al., 2004) (Appendix K). The process for the

development of the content validity of the questionnaire included identification of issues and concerns in the rural and remote nursing literature, review of the questionnaire by the survey team and content experts, piloting the questionnaire with a convenience sample of rural and remote nurses with evaluative feedback, and further revisions with the research team to ensure that the questionnaire would “provide a valid description of the nature of rural and remote practice in Canada” (Stewart et al., p. 125). After the content validity was established in English, the questionnaire was translated into the French language and piloted with bilingual nurses, one of which had worked with the Canadian Nursing Association translating the national nursing registration exam into French. The French version of the questionnaire was finalized after the survey team and the translator reviewed feedback from the bilingual nurses.

The survey questions were organized into fourteen sections under headings that corresponded to demographic information on the individual RN, their nursing employment, the agency composition, relationship between the RN and the community, hours of work, job satisfaction, job strain, nursing practice procedures, health of the RN, work environment, nursing knowledge, career plans, and a general comments section (Appendix K). Scales that were embedded in the questionnaire, to enable comparisons with findings from other studies, included: 1) the Job Content Questionnaire (Karasek, 1985) ($\alpha = .75$) that contained the subscales measuring Psychological Job Demands ($\alpha = .76$), Decision Authority ($\alpha = .68$), and Skill Discretion ($\alpha = .74$); 2) the IWS (Index of Work Satisfaction) scale (Stamps, 1997) ($\alpha = .87$); and 3) the Community Satisfaction Scale (Henderson-Betkus & McLeod, 2003) ($\alpha = .84$) (Stewart et

al., 2005). All internal consistency reliability scores were comparable to previously reported values for these scales (Stewart et al.).

The Index of Work Satisfaction (IWS) developed by Stamps (1997) included subscales that measure autonomy and task requirements, organizational policies and wages, professional status, and the work setting interactions that occur between nurses and between nurses and physicians. Stewart et al. (2005) reported on the modifications made to the IWS in the process of reducing the length of the questionnaire for the survey. Six 5-item subscales were created based on items with the highest factor loadings, and the items had a 7-point Likert scale for response categories consistent with Stamps. An additional item measuring overall job satisfaction was included in the scale as an independent item that could be used for analysis in lieu of the scale.

The Job Content Questionnaire (Karasek, 1985) was used in the survey to assess participant job strain based on Karasek and Theorell's (1990) 'demand control model.' Karasek and Theorell (1990) hypothesized that when psychological work demands are high (e.g., too many tasks to coordinate and complete) and decision latitude is low (e.g., limited opportunity to use one's skills on the job plus low decision-making authority), a high level of psychological strain can occur. Summation of the scores for the Skill Discretion and Decision Authority subscales creates the variable called Decision Latitude. The Job Strain variable was created by dividing each participant's score for Psychological Job Demands by their summated score for Decision Latitude.

The Community Satisfaction Scale measures the satisfaction of the RN with elements of the community (Henderson-Betkus & MacLeod, 2003). These

elements include social and recreational opportunities, safety, anonymity, community size and distance from a major center. The summated ratings on the 11-item, 5-point Likert scale, produced a measure of community satisfaction. A twelfth item indicating overall community satisfaction was also included as an independent item that could be used in lieu of the scale.

Decision rules were developed for the analysis of the above scales to handle missing data and make the best use of the available responses to the scales. For the Index of Work Satisfaction (IWS) (Stamps, 1997), participants were excluded from the analysis if they did not answer six to 30 of the 30 items. If the participant omitted one to five items, the mode for each of the individual items was used as the replacement value. For the Job Content Questionnaire (Karasek, 1985), participants were excluded from the analysis if they did not answer four or more of the 14 items. The mode for the individual item was used as the value for participants who that omitted one to three items in this scale. In the Community Satisfaction Scale (Henderson-Betkus & MacLeod, 2003), participants were omitted if they did not answer two to 11 of the 11 items. For participants who omitted only one item, no replacement of values was performed. In all other variables used in the descriptive analyses, only those participants responding to the questions were used.

4.1.3 Ethical Considerations

The quantitative survey data set does not contain the name or community name of the respondents. The data set can identify participants by province and provincial postal code, however the last 2 digits of the postal codes were not collected from the participants to ensure anonymity. Participant confidentiality

was ensured through the use of participant code numbers for identifiers. Ethics approval for the national survey was granted by the University of Saskatchewan Behavioral Research Ethics Board. A letter that accompanied the questionnaire to each of the participants indicated that consent for use of data was implied when the questionnaire was returned (Appendix L).

4.2 Secondary Analysis

4.2.1 Design

A mixed methods design using a sequential exploratory strategy was chosen for the present study (Morse, 2003). In this design, qualitative data collection and analysis is the leading method followed by quantitative data collection and analysis “to assist in the interpretation of the qualitative findings” (Creswell, 2003, p. 215). The purpose for choosing this strategy was to provide an in-depth analysis of the research problem (Morse, 2003). The quantitative data from the national survey offered contextual data on nursing practice in rural and remote Canada that could contribute to the understanding of the conditions that were insulating and expanding the awareness of dementia for northern nurses. Further, the use of the national survey data enabled an exploration of the transferability of the concepts in the theory beyond the 14 RNs from northern Saskatchewan (Lincoln & Guba, 1985).

The “theoretical drive” for this study was inductive using the grounded theory method and qualitative interview data to create a theory. The qualitative study generated conceptual categories that directed the descriptive analysis of variables in the quantitative data. A diagram of the study design can be found in Appendix C. The survey questions for the quantitative analysis were theoretically

chosen to fit with the conditions found within the categories of the theory. Morse (2003) identified that in sequential designs the second method assists in resolving issues and concerns presented in the first study “or provide a logical extension of the findings from the first study” (p. 199). The goal for the secondary analysis was to describe the context of northern nursing practice and explore the findings in relation to the theoretical concepts of insulating and expanding the awareness of dementia in northern nursing.

Statistical analyses were conducted using SPSS 15. Descriptive statistics were calculated for all demographic variables. Differences between the northern and southern subsets were compared using chi-square tests (categorical, ordinal, and interval variables) and *t*-tests (continuous and scale variables). Variables were used if they met the assumptions for the analysis. Statistical significance was assessed using an alpha level of .05 for the chi-square analyses and .01 for the *t*-tests related to the large and unequal size of the samples. Some of the original survey categories for variables were recoded to provide for either general descriptive representation of the data or to allow statistical analysis of relevant variables.

4.2.2 Sampling Method

A subset of northern nurses was created for this analysis from the national survey using definitions for rural, northern, and northern census division population parameters. All of the qualitative study participants worked in small northern communities. Therefore, the subset selected from the total national survey data (N = 3933) was limited to the participants who identified their workplace within a community with a population under 10,001 people (n = 2951), consistent

but not identical to the definition of rural and small town communities (du Plessis et al., 2001, < 10,000).

A review of definitions of “north” for Canada identified that there is limited agreement on a definition of north geographically or statistically (McNiven & Puderer, 2000), although low population density is a key feature. McNiven and Puderer separated north from south by taking the average of 16 representative national indicators. Indicators were included if they were verified from a secondary source, supported by research, or had a conceptual rationale. The result of their work was the production of a Canadian north-south line (Appendix A).

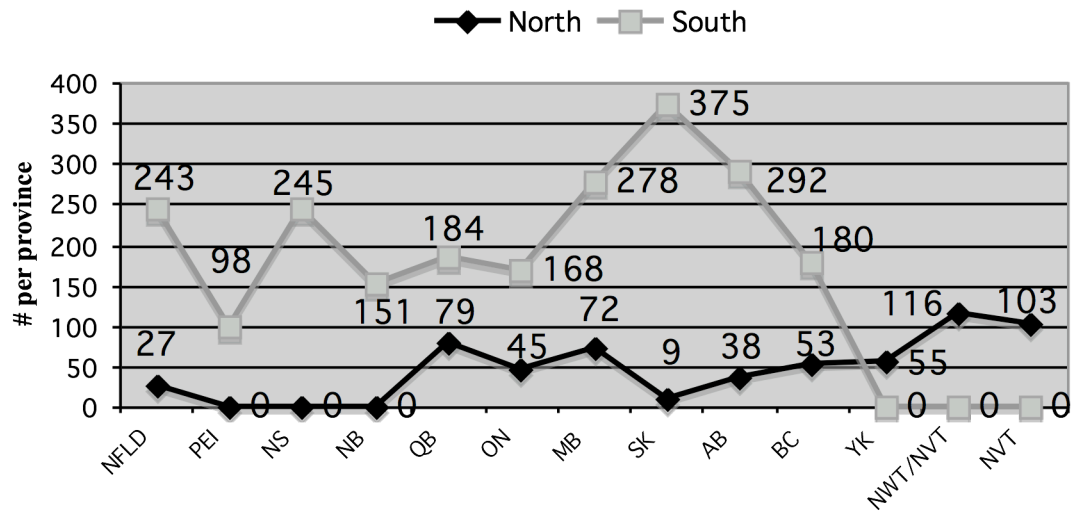
For the purpose of this analysis, northern Canada refers to the geographical area north of the north-south line created by McNiven and Puderer (2000). However, challenges were encountered when fitting the survey data to this line to create a northern sample of RNs. As previously stated, the national survey collected data on the first four postal code digits of the participant’s workplace. This information enabled the matching of the postal code to a census division. Census divisions did not always fall neatly above or below the north-south line. Therefore, the population of each of the census divisions was compared to the Statistics Canada Census Dictionary (Statistics Canada, 2001a) definition of north to assist in the placement of each census division near the north-south line into either the northern or southern subset.

The Statistics Canada (2001) Census Dictionary defines northern census divisions as those with < 0.4 persons per square kilometer. The definition resulted in the exclusion of some northern census divisions above the north-south line that had < 0.4 persons per square kilometer. Therefore, to include these northern

census divisions in the northern sample, the northern sample was created by using all census divisions with a population density of < 0.5 people per square kilometer, above or near the north-south line. Northern census divisions that included larger urban centers were excluded as the population density was over 0.5 people per square kilometer. Once these inclusion criteria for the census divisions in the northern subset were identified, and a list of the census divisions was created and sent to Dr. Roger Pitblado at Laurentian University. Dr. Pitblado was a Professor of Geography, and an Investigator with the Centre for Rural and Northern Health Research, and one of the four Co-Principal Investigators with the project *The Nature of Nursing Practice in Rural and Remote Canada* (MacLeod et al., 2004). He created a northern variable from the national data set, using the census divisions identified as northern, by computer generating a match of the four digit postal code to the census divisions (Appendix M, provided by Dr. Pitblado). The result was the creation of a theoretically representative northern sample based on census divisions that corresponded closely to both rural and northern definitions when overlapping the north-south map and the map of census divisions (Appendix N).

Figure 4.1 presents the distribution of the participants across the provinces and territories. Only 9 of the RNs in the northern subset were from Saskatchewan, which limited the ability to perform a north-south comparison using only data from the province of Saskatchewan. Therefore, a decision was made to use the total rural and remote database from the national study to gain a larger perspective on nursing practice as it relates to dementia care in northern Canada.

Figure 4.1 *Distribution of north-south participants by province and territory*



The final sample size for the secondary analysis consisted of 2751 participants who reported the population of their work community, consistent with that of a rural community or a small town, and the first four digits of their workplace postal code. The northern subset contained 597 participants that were found to be in a northern census division that had a population density of < 0.5 per square kilometer. The southern subset contained the 2154 participants of the remaining census divisions south of the north-south line. The ability to create northern and southern subsets provided an opportunity to broaden the exploration of dementia care issues that were identified in the theory adding a geographical perspective.

In the qualitative study, all 14 participants completed a brief demographic questionnaire after the interview (Appendix J). The purpose of the questionnaire was to ensure uniform collection of demographic and descriptive information across the two sets of data, (i.e., the qualitative study participants and the national survey participants in the secondary analysis), so that the description of the two

samples of participants could be consistent. All but six of the questions chosen for the qualitative study participant questionnaire were derived from the questionnaire from the national survey component of the multi-method study, “The Nature of Nursing Practice in Rural and Remote Canada” (Stewart et al., 2005) (Appendix K). The six new questions included addressed the participants’ past nursing experience, experience with older adults with dementia, and separated their experiences and satisfaction level with telehealth into the areas of continuing education and patient assessment.

The following description of the northern and southern participants is based on the questions that were consistent in both questionnaires. Chi-square analyses were used to compare survey participants (north vs. south) when there were only two categories of a variable. When there are more than two categories the descriptive pattern of the results are presented. Responses to the open-ended questions used from the questionnaire were descriptively analyzed and the themes from the analysis are presented.

4.2.3 Participants

The sample of rural and remote RN participants for this analysis ($N = 2751$) was separated into two representative geographical subsets, representing northern ($n = 597$, 21.7%) and southern ($n = 2154$, 78.3%) Canadian RNs. The demographic characteristics of the northern and southern participants for age and gender are presented in Tables 4.1 and 4.2. In the northern subset 9.9% of the participants were male, while in the southern subset only 4.4% of the participants were male. Results for gender identified a significant difference between the subsets ($\chi^2 [1, N = 2746] = 31.05, p < 0.001$). For age, there were dissimilarities in

the 20 to 29 years and 40 to 49 years age groups where within the northern subset 9.0% were between 20 and 29 years and only 6.3% were between 20 and 29 years in the southern subset. In the northern subset 31.7% were in the 40 - 49 years age group whereas 38.5% were in the 40 - 49 years age group in the southern subset. Comparison of the participants' age between the northern ($M = 44.26$, $SD = 10.36$) and southern ($M = 44.92$, $SD = 9.39$) subsets using independent samples t-test revealed no significant difference between the groups for age; ($t [723.612] = -1.47$, $p < .142$, equal variances not assumed).

Table 4.1 Gender by north-south location

		Location of Participants				χ^2
		North		South		
Variable		n	(%)	n	(%)	
Gender						
	Male	59	(9.9)	88	(4.1)	31.05***
	Female	537	(90.1)	2062	(95.9)	
	Total	596	(100.0)	2150	(100.0)	

Note: May not sum to total sample size owing to missing values.

(* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

Table 4.2 Age by north-south location

Variable	Location of Participants			
	North		South	
	n	(%)	n	(%)
Age in years				
20-29 years	53	(9.0)	134	(6.3)
30-39 years	149	(25.4)	472	(22.2)
40-49 years	186	(31.7)	819	(38.5)
50-59 years	165	(28.2)	594	(27.9)
60 + years	33	(5.6)	110	(5.2)
Total	586	(100.0)	2129	(100.0)

Note: May not sum to total sample size owing to missing values.

Description of the sample by northern and southern location for marital status and whether the participants were living with dependent relatives can be

found in Tables 4.3 and 4.4. There was an interesting difference in the marital status between the northern and southern subsets. In the northern sample, 48.2% were married compared to 76.6% in the southern sample. More RNs in the north were single (22.2% vs 7.0% in the south) or divorced (13.1% vs 6.4% in the south) in comparison to the percentages within the southern subset. Further, a significant difference (χ^2 [1, $N = 2735$] = 59.69, $p < 0.001$) between the subsets was found for the percentage of participants who reported living with a dependent relative or child: 41.7% of northern participants versus 59.5% of southern participants.

Table 4.3 Marital status by north-south location

Variable	Location of Participants			
	North		South	
	n	(%)	n	(%)
Marital Status				
Married	287	(48.2)	1645	(76.7)
Common law	82	(13.8)	172	(8.2)
Single	132	(22.2)	150	(7.0)
Divorced	78	(13.1)	137	(6.4)
Widowed	16	(2.7)	42	(2.0)
Total	595	(100.0)	2146	(100.0)

Note: May not sum to total sample size owing to missing values.

Table 4.4 Living with dependent relatives by north-south location

		Location of Participants				χ^2
		North		South		
Variable		n	(%)	n	(%)	
<hr/>						
Living with dependent						
relative or children	Yes	247	(41.7)	1276	(59.5)	59.69***
	No	345	(58.3)	867	(40.5)	
	Total	592	(100.0)	2143	(100.0)	

Note: May not sum to total sample size owing to missing values.

(* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

The northern and southern subset participants' self-reports of Aboriginal ancestry and the size of their community of origin can be found in Tables 4.5 and

4.6. There was a higher proportion of the participants in the northern subset who indicated they were of Aboriginal ancestry (10.5%) than in the southern subset (4.3%) ($\chi^2 [1, N = 2710] = 33.11, p < 0.001$). The size of the participants' community of origin for the northern subset revealed that 42.9% of the northern participants reported an urban community as their community of origin, whereas only 21.0% of the southern participants were from an urban community.

Table 4.5 Aboriginal ancestry by north-south location

Variable	Location of Participants				χ^2
	North		South		
	n	(%)	n	(%)	
Aboriginal Ancestry					
Yes	62	(10.5)	92	(4.3)	33.11***
No	526	(89.5)	2030	(95.7)	
Total	588	(100.0)	2122	(100.0)	

Note: May not sum to total sample size owing to missing values.

(* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

Table 4.6 Community of origin by north-south location

Variable	Location of Participants			
	North		South	
	n	(%)	n	(%)
Size of community of origin				
Less than 500	93	(15.8)	587	(27.6)
501-1000	66	(11.2)	263	(12.4)
1001-2500	55	(9.4)	297	(14.0)
2501-5000	62	(10.6)	321	(15.1)
5001-10000	59	(10.1)	213	(10.0)
10001+	252	(42.9)	446	(21.0)
Total	587	(100.0)	2127	(100.0)

Note: May not sum to total sample size owing to missing values.

For level of education (Table 4.7), the pattern of results suggests that the participants in the northern subset have attained a higher level of nursing education. In the northern subset, 55.6% had a diploma as the highest level of

nursing education, and in the southern subset 73.4% were educated to the diploma level. Of interest within each subset was the percentage of RNs educated as nurse practitioners or advanced nurse specialists with 11.5% in the northern subset and 4.2% in the southern subset. When the categories for level of education were transformed into two groups, diploma versus degree or higher, a significant difference ($\chi^2 [1, N = 2735] = 69.60, p < 0.001$) was found between the two groups where the northern subset more often reported a degree or higher as their level of education.

Table 4.7 Education by north-south location

Variable	Location of Participants				χ^2
	North		South		
	n	(%)	n	(%)	
Nursing education					
Diploma	329	(55.6)	1573	(73.4)	
Degree	178	(30.1)	463	(21.6)	
Graduate Degree	17	(2.9)	16	(0.7)	
Advanced nurse specialist					
/Nurse Practitioner	68	(11.5)	91	(4.2)	
Total	592	(100.0)	2143	(100.0)	
Highest level of nursing education					
Diploma	329	(55.6)	1573	(73.4)	69.60***
Degree or higher	263	(44.4)	570	(26.6)	
Total	592	(100.0)	2143	(100.0)	

Note: May not sum to total sample size owing to missing values.

(* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

In Table 4.8, there were three categories of comparison for the number of years licensed to practice that are noteworthy between the northern and southern subsets. Within the northern subset, 9.0% of the participants had been licensed to practice 2 to 5 five years, 17.8% for 10 to 14 years, and 44.3% for 20 years or more. In the southern subset 3.9% had been licensed for 2 to 5 years, 13.2% for 10

to 14 years, and 56.0% for 20 years or more. Interestingly, the mode for the northern group was 10 ($Mdn = 17$, $M = 18.5$) whereas the mode in the southern was 25 ($Mdn = 22.0$, $M = 21.0$). Table 4.9 illustrates a statistically significant difference ($\chi^2 [1, N = 2731] = 342.77, p < 0.001$) between the two groups, where 27.5% of the participants in the northern subset and only 3.4% of the participants in the southern subset were licensed to practice in more than one province.

Table 4.8 Number of years licensed to practice as an RN by north-south location

Variable	Location of Participants			
	North		South	
	n	(%)	n	(%)
Number of years licensed to practice as an RN				
Less than 2 years	25	(4.2)	48	(2.2)
2-5 years	53	(9.0)	84	(3.9)
6-9 years	62	(10.5)	203	(9.5)
10-14 years	105	(17.8)	281	(13.2)
15-19 years	83	(14.1)	323	(15.1)
20 years or more	261	(44.3)	1196	(56.0)
Total	589	(100.0)	2135	(100.0)

Note: May not sum to total sample size owing to missing values.

Table 4.9 Licensed in more than one province by north-south location

Variable	Location of Participants				χ^2
	North		South		
	n	(%)	n	(%)	

Licensed in more than one province					
Yes	162	(27.5)	72	(3.4)	342.77***
No	428	(72.5)	2079	(96.6)	
Total	590	(100.0)	2141	(100.0)	

Note: May not sum to total sample size owing to missing values.

(* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

Tables 4.10 and 4.11 identifies the position status of the participants as either in a permanent full-time, part-time, or job share positions, and casual non-permanent positions, and well as the number of positions in full-time equivalents

for the two subsets. In the northern subset 69.2% reported their position as full-time and 55.5% in the southern subset. Of interest was the proportion of participants in the southern subset (32.6%) in part-time positions in comparison to the northern subset (13.5%). By contrast, 10.7% of the southern subset had casual positions compared to 14.4% from the north. There was no difference (χ^2 [1, $N = 2736$] = 0.48, $p = 0.488$) between the two subsets of participants holding more than one nursing position.

Table 4.10 *Position status by north-south location*

Variable	Location of Participants			
	North		South	
	n	(%)	n	(%)
Position status				
Full-time	332	(69.2)	1026	(55.5)
Part-time	65	(13.5)	602	(32.6)
Job share	14	(2.9)	23	(1.2)
Casual	69	(14.4)	197	(10.7)
Total	480	(100.0)	1848	(100.0)

Note: May not sum to total sample size owing to missing values.

Table 4.11 *Number of positions held by participants by north-south location*

Variable	Location of Participants				χ^2
	North		South		
	n	(%)	n	(%)	
<hr/>					
More than one position					
Yes	127	(21.5)	434	(20.2)	0.48
No	463	(78.5)	1712	(79.8)	
Total	590	(100.0)	2146	(100.0)	

Note: May not sum to total sample size owing to missing values.

(* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

Table 4.12 presents the work setting of the participants with the frequencies in rank order for the north. In the northern subset, 53.3% were working in nursing stations, followed by 20.8% in general hospitals, and 8.3% in community health agencies. By contrast, 36.0% of the southern subset participants

reported working in general hospitals, 17.7% in LTC, and 12.3% in community health agencies. Home care agencies were the next most frequently reported work setting in both the northern (2.9%) and southern (9.1%) samples. There were only 3.4% of the northern participants who reported working in LTC which is where dementia care is typically provided when family and community based resources (i.e., home care) can no longer support older adults in their homes.

Table 4.12 RN Work setting by north-south location

Variables	Location of Participants			
	n	(%)	n	(%)
Work setting				
Nursing Station/Health Centre (Outpost nurse clinic)	316	(53.5)	159	(7.4)
General Hospital/Air Ambulance/Dialysis	123	(20.8)	771	(36.0)
Community Health Agency	49	(8.3)	264	(12.3)
Other	23	(3.9)	73	(3.4)
Nursing Home/LTC Facility/Rehabilitation				
/convalescent centre	20	(3.4)	379	(17.7)
Home Care	17	(2.9)	195	(9.1)
Integrated Facility	14	(2.4)	170	(7.9)
Educational institution/ Association/government	12	(2.0)	27	(1.3)
Business – industry occupational health/ Private				
Nursing Agency/ Self-employed	9	(1.5)	27	(1.3)
Physician's office/family practice unit	4	(0.7)	42	(0.7)
Mental Health Centre/corrections/addictions	4	(0.7)	34	(1.6)
Number	591	(100.0)	2141	(100.0)

Note: May not sum to total sample size owing to missing values.

The current nursing positions of the participants are presented in Table 4.13. In the northern subset, staff nurses (28.%), community health nurses (26.3%), and nurse practitioners (12.1%) were found to be the three most often

reported nursing positions. For the southern subset, the three most often reported positions were staff nurse (54.2%), community health nurse (12.4%), and head nurse/unit manager (4.3%). In both subsets, workplaces with 1.5 to 5 RN positions in full-time equivalents (Table 4.14) were most frequently reported in the northern (50.9%) and southern (34.8%) subsets. The categories to present the data on the number of workplace positions were selected using the mode (mode = 1), the median ($Mdn = 5$), and the mean ($M = 11.8$) values as group separators using the total north-south sample. Interestingly, the mode for the northern group was 2 ($Mdn = 4$, $M = 6.8$) whereas the mode in the southern group was 1 ($Mdn = 5.5$, $M = 13.2$).

Table 4.13 Nursing position by north-south location

Variables	Location of Participant			
	North		South	
	n	(%)	n	(%)
<i>Current Position</i>				
Staff Nurse	167	(28.4)	1159	(54.2)
Community Health Nurse	155	(26.3)	264	(12.4)
Nurse Practitioner	71	(12.1)	69	(3.2)
Head Nurse/Unit Manager	36	(6.1)	92	(4.3)
Supervisor	23	(3.9)	74	(3.5)
Program Coordinator	9	(1.5)	42	(2.0)
Educator	9	(1.5)	30	(1.4)
Chief Nursing Officer/Director	5	(0.8)	54	(2.5)
Occupational Health Nurse	5	(0.8)	9	(0.4)
Consultant	5	(0.8)	11	(0.5)
Office Nurse	3	(0.5)	32	(1.5)
Clinical Nurse Specialist	3	(0.5)	12	(0.6)
Assistant/Associate Director	-		13	(0.6)
Researcher	-		1	(0.0)
Other	98	(16.6)	275	(12.9)
Total	589	(100.0)	2137	(100.0)

Note: May not sum to total sample size owing to missing values.

Table 4.14 Number of workplace RNs by north-south location

Variable	Location of Participants			
	North		South	
	n	(%)	n	(%)
Number of workplace RNs including self				
≤ 1 position	76	(12.7)	264	(12.3)
1.5-5 positions	304	(50.9)	750	(34.8)
5.5-12 positions	129	(21.6)	571	(26.5)
over 12.5 positions	88	(14.7)	569	(26.4)
Total	597	(100.0)	2145	(100.0)

Note: May not sum to total sample size owing to missing values.

Table 4.15 outlines the primary area of practice rank ordered for the northern subset. In the northern sample, participants spent most of their time practicing in acute care (34.7%), followed by community health (24.4%) and primary care (20.6%). Only 3.7 % and 3.5% of this group were found to practice in home care and LTC respectively. In the southern group, the areas of practice where they spent most of their time were acute care (36.9%), LTC (20.6%) and community health (13.7%). Only 9.9% of the southern group reported their current area of practice as home care and 5.3% as primary care.

Table 4.15 Area of Practice by north-south location

Variable	Location of Participant			
	North		South	
	n	(%)	n	(%)
Area of practice				
Acute Care	199	(34.7)	785	(36.9)
Community Health	140	(24.4)	292	(13.7)
Primary Care	118	(20.6)	113	(5.3)
Administration/Education/				
Research	57	(9.9)	203	(9.5)
Home Care	21	(3.7)	210	(9.9)
LTC	20	(3.5)	438	(20.6)
Other	18	(3.1)	85	(4.0)
Total	573	(100.0)	2126	(100.0)

Note: May not sum to total sample size owing to missing values.

The survey included questions about the length of time an RN had been in their current primary position (Table 4.16) or employed in their primary agency (Table 4.17). In the northern subset, 70.3% were in their current primary position less than 5 years; whereas, in the southern subset 50.2% were in their present primary position for less than 5 years. In the northern subset only 15.2% had been in their current position over 10 years compared to 38.0% in the southern subset. In the northern subset 54.5% had been with their current primary agency for less than 5 years (compared to 30.3% in the southern subset), and 30.3% had been with their agency for 10 years or more (compared to 56.9% in the southern subset).

Table 4.16 *Time in position by north-south location*

Variable	Location of Participants			
	North		South	
	n	(%)	n	(%)
Time in current primary position				
Less than 2 years	227	(38.3)	498	(23.2)
2 to 5 years	190	(32.0)	580	(27.0)
6 to 9 years	83	(14.0)	255	(11.9)
10 to 14 years	52	(8.8)	338	(15.7)
15 to 19 years	20	(3.4)	199	(9.3)
20 years or more	21	(3.5)	280	(13.0)
Total	593	(100.0)	2150	(100.0)

Note: May not sum to total sample size owing to missing values.

Table 4.17 Time employed at primary agency by north-south location

Variable	Location of Participants			
	North		South	
	n	(%)	n	(%)
Time employed at primary agency				
Less than 2 years	148	(24.9)	272	(12.7)
2 to 5 years	176	(29.6)	374	(17.5)
6 to 9 years	90	(15.2)	282	(13.2)
10 to 14 years	86	(14.5)	391	(18.3)
15 to 19 years	45	(7.6)	269	(12.6)
20 years or more	49	(8.2)	553	(25.8)
Total	594	(100.0)	2141	(100.0)

Note: May not sum to total sample size owing to missing values.

Table 4.18 presents the data on the length of time the participants expected to stay in their current primary position. In the northern subset, 22.0% of the RNs expected to stay in their current position less than one year and 29.7% expected to stay over five years. In the southern subset 10.7% expected to stay less than one year and 56.0% expected to stay more than one year.

Table 4.18 Time expected to remain in present position by north-south location

Variable	Location of Participants			
	North		South	
	n	(%)	n	(%)
Time expected to remain in present job				
Less than 1 year	127	(22.0)	226	(10.7)
1 to 2 years	158	(27.4)	279	(13.2)
2 to 4 years	120	(20.8)	428	(20.2)
5 + years	171	(29.7)	1188	(56.0)
Total	576	(100.0)	2121	(100.0)

Note: May not sum to total sample size owing to missing values.

Northern participants predominantly reported their hours of work (Table 4.19) as eight-hour shifts (72.6%) followed by rotating 12-hour shifts (12.8%).

Southern participants also predominantly reported working eight-hour shifts

(49.4%) and rotating 12-hour shift (17.5%). Within the northern subset, 83.6% of participants reported that nurses were the first health care contact in their community (Table 4.20), whereas in the southern sample only 46.0% identified nurses as the first health care contact in their community. A large percentage (71.9%) of the northern subset reported that they were required to be on call (Table 4.21). In the southern sample less than half (36.8%) reported being on call as part of their employment. Description of on-call hours ranged from a few days a year to 24 hours a day, 7 days a week. A large percentage (58.3%) of northern participants reported that they used interpreters in their practice whereas in the southern subset a small percentage (9.9%) reported having used an interpreter (Table 4.22). Statistically significant differences between the northern and southern subsets for these variables found the northern RNs as more often the first health care contact within the community ($\chi^2 [1, N = 2706] = 263.91, p < 0.001$), more often required to be on-call as part of their position ($\chi^2 [1, N = 2722] = 230.13, p < 0.001$), and more often working with interpreters ($\chi^2 [1, N = 2741] = 671.84, p < 0.001$).

Table 4.19 Hours of work by north-south location

Variable	Location of Participants			
	North		South	
	n	(%)	n	(%)
Hours of work				
Days 8 hour	432	(72.6)	1062	(49.4)
Days 12 hour	13	(2.2)	114	(5.3)
Evenings 8 hour	5	(0.8)	99	(4.6)
Nights 8 hour	6	(1.0)	61	(2.8)
Nights 12 hour	5	(0.8)	64	(3.0)
Rotating 8 hour	12	(2.0)	134	(6.2)
Rotating 12 hour	76	(12.8)	376	(17.5)
Other	46	(7.7)	240	(11.2)
Total	595	(100.0)	2150	(100.0)

Note: May not sum to total sample size owing to missing values.

Table 4.20 RN first contact for health care services by north-south location

Variable	Location of Participants				χ^2
	North		South		
	n	(%)	n	(%)	
RN first contact for health care services					
Yes	495	(83.6)	972	(46.0)	263.91***
No	97	(16.4)	1142	(54.0)	
Total	592	(100.0)	2114	(100.0)	

Note: May not sum to total sample size owing to missing values.

(* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

Table 4.21 Required to be on-call by north-south location

Variables	Location of Participants				χ^2
	North		South		
	n	(%)	n	(%)	
<hr/>					
Required to be on call					
Yes	423	(71.9)	786	(36.8)	230.13***
No	165	(28.1)	1348	(63.2)	
Total	588	(100.0)	2134	(100.0)	

Note: May not sum to total sample size owing to missing values.

(* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

Table 4.22 Use of interpreters in nursing practice by north-south location

Variable	Location of Participants				χ^2
	North		South		
	n	(%)	n	(%)	
Use interpreters in practice					
Yes	345	(58.3)	212	(9.9)	671.84***
No	247	(41.7)	1937	(90.1)	
Total	592	(100.0)	2149	(100.0)	

Note: May not sum to total sample size owing to missing values.

(* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

Table 4.23 presents the descriptive data about whether the participants' perceived barriers to participating in continuing education and the adequacy of their current organization to meet their learning needs. Within the two subsets 76.5% of the northern and 64.7% of the southern participants perceived that there were barriers. The difference between the subsets was statistically significant ($\chi^2 [1, N = 2704] = 29.05, p < 0.001$). Although the survey did not specifically ask about barriers to dementia education, a general examination of their perception of the adequacy of their current organization to meet their learning needs was included in this analysis (Table 4.24). A smaller percentage of northern RNs reported that their current organization was able to meet their learning needs in comparison to southern RNs.

Table 4.23 Perceived barriers to continuing education by north-south location

Variable	Location of Participants				χ^2
	North		South		
	n	(%)	n	(%)	
Perceived barriers to participation in continuing education					
Yes	450	(76.5)	1370	(64.7)	29.05***
No	138	(23.5)	746	(35.3)	
Total	588	(100.0)	2116	(100.0)	

Note: May not sum to total sample size owing to missing values.

(* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

Table 4.24 Adequacy of agency to meet learning needs by north-south location

Variable	Location of Participants			
	North		South	
	n	(%)	n	(%)
Adequacy of current organization to meet learning needs				
Very adequate	65	(11.1)	228	(16.1)
Mostly adequate	174	(29.8)	904	(43.0)
Somewhat adequate	203	(34.8)	649	(30.8)
Not at all adequate	142	(24.3)	213	(10.1)
Total	584	(100.0)	2104	(100.0)

Note: May not sum to total sample size owing to missing values.

Thematic analysis of the responses to the open-ended survey question, “What are those barriers” to continuing education resulted in the creation of three categories of barriers: personal, community, and workplace. Personal barriers primarily included comments about not having enough time, money, and energy to commit to continuing education. Community barriers included concerns about geographical isolation, travel and weather related challenges in accessing education that was not available in the community. Workplace barriers involved issues surrounding the lack of organizational support or recognition for continuing education, staffing issues to replace RNs attending educational events, and a lack of awareness of educational opportunities.

The participant responses were categorized using NUD*IST-6 (Non-numerical Unstructured Data Indexing, Searching, and Theorizing Software) and the categorically coded responses were exported into SPSS, which was used to count the frequency of responses on a theme. Analysis of the three themes identified the most frequently cited barriers to continuing education for northern RNs were worklife barriers (n = 309) followed by community barriers (n = 134), and personal barriers (n = 83). For the southern RNs, the most frequently cited

barriers pertained to their workplace (n = 930), personal barriers (n = 338), and community barriers (n = 287). Chi-square analyses were not computed on these variables as not all participants responded to the question or contributed to all themes.

Between the northern and southern subsets, there was no significant difference in access to telehealth at work ($\chi^2 [1, N = 2513] = 1.25, p = 0.264$) (Table 4.25) with only 26.9% of the northern and 24.6% of the southern participants reporting telehealth access. However, for the participants who had access to telehealth, there was a significant difference ($\chi^2 [1, N = 594] = 15.09, p < 0.001$) with more of the southern participants reporting being very to somewhat satisfied with telehealth (Table 4.26) and more northern participants being somewhat to very dissatisfied.

Table 4.25 Telehealth access in workplace by north-south location

Variable	Location of Participants				χ^2
	North		South		
	n	(%)	n	(%)	
<hr/>					
Telehealth access in workplace					
Yes	153	(26.9)	479	(24.6)	1.25
No	415	(73.1)	1466	(75.4)	
Total	568	(100.0)	2116	(100.0)	

Note: May not sum to total sample size owing to missing values.
 (* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

Table 4.26 Satisfaction with Telehealth by north-south location

Variable	Location of Participants				χ^2
	North		South		
	n	(%)	n	(%)	
<hr/>					
Satisfaction with telehealth in workplace					
Very to somewhat Satisfied	90	(61.6)	349	(77.9)	15.09***
Somewhat to very dissatisfied	56	(38.4)	99	(22.1)	
Total	146	(100.0)	448	(100.0)	
<hr/>					

Note: May not sum to total sample size owing to missing values.

(* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

In the qualitative interview data, participants were asked to describe their clients by ethnicity, language, and age. The survey data also collected information about the participants' clients in an open-ended question. The client characteristic data were coded in NUD*IST-6 and the categorically coded responses were exported into SPSS. Categories were created for participant reports about their clients' age (grouped into 4 variables for age ranges), language (Aboriginal languages vs non-Aboriginal language), and heritage (First Nations, Inuit, and Métis vs other ethnicities). Again, chi-square analysis was not performed on the variables as participants' responses may have been contributed to more than one category per variable and therefore did not meet the assumption of independence. Further, not all participants responded by scribing their clients using age, ethnicity, and language.

Categorical coding of the responses indicated that for the northern subset, one in four of the participants ($n = 129$) described their clients as Aboriginal and a smaller number ($n = 112$) described their clients as speaking an Aboriginal dialect. In the southern sample, small number of the participants described their clients as Aboriginal ($n = 177$) or speaking an Aboriginal dialect ($n = 88$). Of the survey

participant responses about the age of their clients, the majority of northern participants described their client population as consisting of all age groups ($n = 158$). Few of the northern participants ($n = 40$) described their clients using words that could be categorized in an over 60 years of age category (i.e., over 60 or 65, seniors). In the southern subset, the most frequent descriptor for the age of their clients were terms that represented a population over the age of 60 years ($n = 297$).

In summary, the participants ($N = 2751$) in the northern and southern subsets did not respond in a similar manner for most variables. The northern and southern subset can be described as similar for age (Table 4.2), the proportion of RNs with more than one nursing position (Table 4.11), and the proportion with access to telehealth (Table 4.25). The northern participants can be portrayed as more often single with fewer dependents (Tables 4.3 & 4.4), working in small facilities such as nursing stations or community health centres (Tables 4.12), in community or primary care positions (Table 4.13), and reporting their hours of work as full-time in an eight-hour day shift (Table 4.19). Further, the northern subset more often reported being the first health care contact in their community (Table 4.20) and working with interpreters (Table 4.22), and more often described their clients as Aboriginal, from all age groups, and few described their clients as over the age of 60 years; whereas southern nurses were five times as likely to report caring for clients over the age of 60 years. Other dissimilarities between the samples included the larger proportion of men (Table 4.1) and a larger proportion of Aboriginal RNs (Table 4.5) in the northern subset, as well as the frequencies that suggest the northern subset participants were more often from an urban centre (Table 4.6), educated at the baccalaureate level (Tables 4.7), and were licensed to

practice in more than one province (Table 4.9). Concerns for the stability of the practice setting can be identified in the northern subset where more of the participants reported the length of time in their current primary position as under five years (Table 4.16), their plans to leave their present position in less than one year (Table 4.18), and more often reporting barriers to continuing education (Table 4.23).

4.3 Questionnaire Variable Selection

Glaser and Strauss (1967) suggested that quantitative data can be useful for theory generation, through the use of crude indexes such as “a single questionnaire item or a simple summation index of two to six items” (Glaser & Strauss, p. 190). These indexes could be used in crosstabulation to explore percentage differences between two groups. Although Glaser and Strauss (1967) described the use of quantitative data to generate theory prior to the development of mixed method research designs, their approach is consistent with a descriptive analysis and an “inductive drive” for the exploration of the national survey data.

More recently, Morse (2003) outlined principles for mixed method designs that provided a rationale for variable selection. These principles suggest that in mixed method studies, researchers need to recognize the theoretical drive for the study, identify the purpose of the additional method, and adhere to the assumptions of the methods used. In this study, the drive was inductive and the overall goal was to explore dementia care in northern Saskatchewan from the perspective of Registered Nurses. The purpose of the quantitative analysis in this mixed method design was to provide contextual data on nursing practice in northern Canada to broaden the exploration of categories and conditions drawn from the qualitative

interviews on practice issues and concerns in dementia care. This context was gained through descriptive analysis.

Further, Morse (2003) suggested that quantitative survey data used in a mixed method design needed to be collected from a randomly selected sample external to the qualitative study. Although this is suggested as a challenge in the use of a QUAL → quan design, access to the national survey provided a large external sample for secondary analysis. The stratified random sampling in the national survey, that resulted in a representative sample of rural and remote RNs (Stewart et al., 2005), supported the use of this data set within the present study.

The categories and conditions of the theory guided the selection of survey questions for this analysis. Questions selected for analysis are presented below using the headings of the three theory categories and subcategories. Not all of the subcategories had corresponding variables in the survey questionnaire. Therefore, summary lists of the categories and questions (Figures 4, 5, & 6) are included to tie the selection of the survey questions to the conditions within each of the categories. The national survey questionnaire (Appendix K) used the letters A to N as labels to differentiate the content into major sections; embedded scales were not named. Within the alphabetical sections the questions were labeled numerically; subsections under the numbers were identified with lower case letters. These major section labels (A to N) and the corresponding numerical question numbers are placed in parentheses in the following description of the specific survey questions selected so that the reader can easily locate the original question inside the national survey document.

4.3.1 Dementia Care and Community Caregiving

The survey has limited data relevant to the category “Dementia care and Community caregiving.” Figure 4.2 summarizes the sub-categories from the theory and the corresponding questions that were used in this analysis to provide contextual information about dementia care and community caregiving. There were two survey questions in which the word “dementia” occurred. In the first question (J.4), dementia was given as one of five choices for the primary diagnosis of a perpetrator of an aggressive act. The second occurrence of the word dementia emerged in responses to an open-ended question in which the participants were asked to describe the characteristics of their clients (C.18) with five examples given including “age” (dementia is an age-related condition).

Figure 4.2 *Survey questions related to Dementia Care and Community Caregiving*

<i>Dementia care and Community caregiving</i>
Dementia assessment and diagnosis <ul style="list-style-type: none">• Dementia identified as the diagnosis of the perpetrator of an aggressive act• Area of current practice by:<ul style="list-style-type: none">○ Dementia identified as the diagnosis of the perpetrator of an aggressive act○ Dementia as a client characteristic
Dementia education <ul style="list-style-type: none">• The survey did not have questions that specifically addressed dementia education for RNs. One open-ended question asked the participants to identify what part of their education prepared them for their position as a rural or remote nurse. However, the responses were general and not practice area specific.
Dementia caregiving <ul style="list-style-type: none">• Availability of home care, hospital, family physician, mental health, and specialist services in their communities.• Work setting and area of current practice to identify RNs working LTC and home care.

4.3.1.1 Dementia Assessment and Diagnosis

The word dementia occurred only once in the printed survey questionnaire as one of five choices given to determine the primary diagnosis of the perpetrator of an aggressive act (J4). However, the word dementia, and related terms, was found in the open-ended question that asked participants to describe their client population (C18). This question prompted the participants to describe their clients' ethnicity, age, gender, and language. As responses to this question were also found to include the term dementia and Alzheimer's disease, an exploration of the occurrence of the word dementia as a client characteristic provided an opportunity to identify the work setting of the participants who reported dementia as a characteristic in their client population. As in the qualitative data collection method where participants working in a community with a LTC facility would have an increased potential for interacting with older adults with dementia, it was assumed that nurses working in LTC would more frequently interact with older adults with dementia. The "area of current practice" where the RNs spent most of their time (B6b), was explored in relation to dementia variables to identify the context within northern and southern nursing practice where RNs are exposed to clients with dementia.

4.3.1.2 Dementia Education

The survey did not include a question about the availability of educational opportunities or resources related to the care of individuals with dementia. The only possible location where it could emerge was in one open-ended question that asked the participants to identify what part of their education prepared them for

their position as a rural or remote nurse (N4). However, the responses were general and not practice area specific.

4.3.1.3 Dementia Caregiving

Exploration of responses to questions about the availability of home care, hospital, family physician, mental health, and specialist services in their communities (C11), assisted in the identification of resources for dementia in assessment, diagnosis, education, and caregiving in northern and southern communities.

4.3.2 The Individual Characteristics of the RN

The survey was able to contribute a limited amount of data relevant to analyzing the Individual Characteristics of the RN. The following figure 4.3 summarizes the sub-categories from the theory and corresponding questions used in this analysis that provided contextual information on the range of insulating and expanding conditions that forms the individual RNs awareness of dementia.

Figure 4.3 Survey questions related to Individual Characteristics of the RN

<i>Individual characteristics of the RN</i>	
Comfort living in a northern community	
<ul style="list-style-type: none">• Summated community satisfaction scale• I am happy with the community in which I work• Do you feel the community is supportive of the health agency you work for?• I am frequently recognized in public by clients• I am bothered when I am recognized in public by clients• When I' m not at work, people frequently asked me for professional advice• I am bothered when people ask for professional advice when I' m not at work	
Prior nursing experience	
<ul style="list-style-type: none">• The survey did not have questions that could address prior nursing experience related to dementia care.	
Challenges in communication	
<ul style="list-style-type: none">• Do you use an interpreter to assist you in your work?" by area of practice for northern and southern RNs	

4.3.2.1 Comfort Living in a Northern Community

4.3.2.1.1 Community integration. Community integration can be defined as the nurses' level of comfort interacting socially in their community (e.g., going out for tea). Community integration of the RNs, through social interactions in their communities, could not directly assessed in the survey. To explore the comfort that RNs experienced living in a northern community, questions related to the participants' perceptions of their community were identified. Participants' satisfaction with their present community was analyzed using the summated community satisfaction scale (C31) to detect the potential for differences between northern and southern RNs. Two other questions included in this analysis were "Would you say: I am happy with the community in which I work" (C27a), and "Do you feel the community is supportive of the health agency you work for?"

(C7) as both questions are relevant to an exploration of the perception of the RNs' comfort working in a small community.

4.3.2.1.2 Social isolation. Social isolation was defined as the nurses' level of comfort with their professional status that controlled their actions in the community, in part related to their lack of anonymity. Social isolation could not be directly assessed from the questions in the survey. However, a series of questions addressed the RNs' interactions within small communities where they would be recognized and might be expected to provide professional advice. In remote isolated areas, the RN might be the only health care professional available on a regular basis in the community.

Social isolation was explored using the set of survey questions concerning the RNs' interactions within the community (C27b-e), which included: "Would you say: I am frequently recognized in public by clients" (C27b), "Would you say: I am bothered when I am recognized in public by clients" (C27c), "Would you say: I am asked for professional advice when I am not at work" (C27d), and "Would you say: I am bothered when I am asked for professional advice when I am not at work" (C27e). This set of 4 questions were used to explore the community's comfort approaching RNs, the RNs' comfort in being approached outside of the workplace, and the potential for the RNs' discomfort when approached for advice in the community contributing to the potential for avoidance of social interactions.

4.3.2.2 Prior Nursing Experience

The survey did not include questions about the prior nursing experience of the participants that could be related to dementia caregiving.

4.3.2.3 Challenges in Communication

The qualitative analysis identified that one of the largest challenges in northern nursing practice was the provision of care where a language barrier existed between the client and the RN. Challenges in communication were explored by analysis of the question “Do you use an interpreter to assist you in your work?” (C10) in relation to the participants area of practice (B6b) for northern versus southern RNs. This analysis helped to identify the work settings where RNs are more often assisted by the services of an interpreter.

4.3.3 Northern Nursing Worklife

A moderate amount of survey data was relevant to analyzing the category of Northern Nursing Worklife. Figure 4.4 summarizes the sub-categories from the theory and corresponding survey questions used in this analysis to provide contextual information on the insulating and expanding conditions related to northern nursing worklife.

Figure 4.4 Survey questions related to Northern Nursing Worklife

<i>Northern Nursing Worklife</i>	
Workplace as an island	
<ul style="list-style-type: none">• Nursing procedures used in practice• Job satisfaction• Career plans	
Perceptions on Professional isolation	
<ul style="list-style-type: none">• Do you consider your workplace remote?• Do you consider your workplace rural?• Are you currently working in a community accessible only by plane?• Do you have direct access in your workplace via the computer to other information resources such as those on the Internet for your use in nursing practice?• On what basis does this [colleague consultation] contact take place?• Do you have a support network of colleagues who provide consultation and/or professional support?• What disciplines are represented in your consultation/professional support network?• Are colleagues available to you for consultation when you need them?	
Characteristics of nursing practice roles	
<ul style="list-style-type: none">• Have you facilitated health promotion activities in your community?• Are there nursing practice and decision making skills that you perform on an advanced level in your area of practice?• Differences in job strain between RNs in northern and southern nursing practice.	

4.3.3.1 Workplace as an Island

The survey questions did not allow for the direct exploration of the concept of the workplace as an island. However, questions that could add contextual information on nursing practice in northern communities included the section of the questionnaire that listed the nursing procedures used in practice (E1), which would tend to keep the RN in the clinic rather than in the community. These questions were analyzed to explore the percentage of RNs performing the different types of procedures by northern and southern geographic locations. Job satisfaction (F), as captured using the summated scale (items 1 – 30), was also

included as a variable that may indicate the direction of the relationship between the RN and the workplace in northern and southern communities. Further, questions about the RNs career plans for the next five years (L4) were included to explore retention of RNs in the north.

4.3.3.2 Perceptions on Professional Isolation

The level of professional isolation was examined using questions in which participants reported on the location of their workplace: “Do you consider your workplace remote?” (C3) and “Do you consider your workplace rural?” (C4). Access to their workplace in relation to the perception of the work community as isolated included a north-south analysis of the question “Are you currently working in a community accessible only by plane?” (C5). Further, professional isolation was assessed in relation to technology used in practice to connect and inform northern and southern rural and remote professionals in the questions, “Do you have direct access in your workplace via the computer to other information resources such as those on the Internet for your use in nursing practice?” (C16). Professional isolation was also explored using the questions related to mode of contact between colleagues and colleague support using the following questions: “On what basis does this [colleague consultation] contact take place?” (C22), “Do you have a support network of colleagues who provide consultation and/or professional support?” (C19), “What disciplines are represented in your consultation/professional support network?” (C20), and “Are colleagues available to you for consultation when you need them?” (C21).

4.3.3.3 Characteristics of Nursing Practice Roles

Characteristics of nursing practice were explored using survey questions to discover the extent to which northern RNs were functioning in extended roles. Questions included: “Have you facilitated health promotion activities in your community?” (E3), and “Are there nursing practice and decision making skills that you perform on an advanced level in your area of practice?” (E4).

As the preceding questions on the characteristics of nursing practice are related to the demands on the RN in northern and southern practice locations, Karasek and Theorell’s (1990) Job Content Questionnaire was used to identify differences in job strain between RNs in northern and southern communities. Karasek and Theorell developed the “Demand control model” in which they propose that when psychological job demands are high and decision latitude (the ability to decide when a skill is used and to what degree) is low, then a high level of strain can occur. Performance of numerous simultaneous tasks is stated to increase stress in job performance.

4.4 Summary

Definitions of rural and northern guided the selection of a theoretical sample of participants from the survey method of the national study, “The Nature of Nursing Practice in Rural and Remote Canada” (Stewart et al., 2005). Questions from the national survey on rural and remote nursing practice were used in a comparative descriptive north-south analyses led by the concepts constructed in the qualitative grounded theory analysis, *Insulating and Expanding the Awareness of Dementia in Northern Nursing*. The use of questions from the national survey questionnaire ensured uniform collection of demographic and

descriptive information across the two sets of data, (the qualitative study participants and the national survey participants in the secondary analysis), so that the description of the two samples of participants could be consistent. Although the national survey could not contribute to an understanding of all concepts from the qualitative study, the survey does provide an ample number of questions that provide contextual information on conditions that influence the RNs' awareness of dementia.

5 CHAPTER FIVE - QUANTITATIVE FINDINGS

This chapter presents the findings of the secondary analysis of the national nursing survey component (Stewart et al., 2005), “The Nature of Nursing Practice in Rural and Remote Canada” (MacLeod et al., 2004). The analysis is a descriptive north-south comparison of survey data. A secondary analysis of the national survey data was relevant to this project as it provided a theoretical sample population of northern and southern Canadian RNs that contributed contextual data to the exploration of dementia care in northern Saskatchewan. As the theory, *Insulating and Expanding the Awareness of Dementia in Northern Nursing*, was used as the theoretical lens that guided the exploration of the survey data, the findings are presented under the category headings from the grounded theory analysis: *Dementia Care and Community Caregiving*, *Individual Characteristics of the RN*, and *Northern Nursing Worklife*.

5.1 Dementia Care and Community Caregiving

5.1.1 Dementia Assessment and Diagnosis

There were two survey questions in which the word “dementia” occurred. In the first question (J.4) dementia was given as one of five choices for the primary diagnosis of a perpetrator of an aggressive act (Table 5.1). Of the RNs who experienced aggression, more southern RNs (41.6%) than northern RNs (5.2%) attributed the aggressive event to a client with dementia ($\chi^2 (1, N = 848) = 89.49, p < 0.001$).

Table 5.1 Dementia is diagnosis of aggressor by north-south location

Variable	Location of Participants				χ^2
	North		South		
	n	(%)	n	(%)	
<hr/>					
Dementia is diagnosis of aggressor					
Dementia	10	(5.2)	272	(41.6)	89.49***
Other than Dementia	184	(94.8)	382	(58.4)	
Total	194	(100.0)	654	(100.0)	

Note: May not sum to total sample size owing to missing values.

(* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

The findings from the open-ended question in which the participants were asked to describe the characteristics of their clients resulted in a small number of participants in both the northern ($n = 3$) and southern subsets ($n = 36$) who used the word dementia in the descriptions of their client population. The variable, “the aggressor diagnosed with dementia” was stratified by area of practice north and south (Table 5.2). The participants who had experienced aggression with a client diagnosed with dementia, in both the northern (70.0%, $n = 10$) and the southern (66.0%, $n = 175$) subsets, were more likely to work in LTC.

Table 5.2 Dementia identification by area of nursing practice in north

Variable	North				South			
	Yes		No		Yes		No	
	n	(%)	n	(%)	n	(%)	n	(%)
Current practice								
Acute Care	2	(20.0)	82	(45.6)	64	(24.2)	193	(51.1)
Long Term Care	7	(70.0)	4	(2.2)	175	(66.0)	69	(18.3)
Community Health	-		30	(16.7)	4	(1.5)	30	(7.9)
Home Care	-		7	(3.9)	6	(2.3)	34	(9.0)
Primary Care	-		40	(22.2)	3	(1.1)	26	(6.9)
Admin/Education/Research	1	(10.0)	11	(6.1)	9	(3.4)	19	(5.0)
Other	-		6	(3.3)	4	(1.5)	7	(1.9)
Total	10	(100.0)	180	(100.0)	265	(100.0)	378	(100.0)

Note: May not sum to total sample size owing to missing values.

5.1.2 *Dementia Caregiving*

Tables 5.3 present the findings from the survey questions on the availability of health care services (C11) in northern and southern communities that were explored in relation to dementia caregiving and diagnostic services. Categories of daily and weekly, and bimonthly to annually were collapsed: 1) as there were small numbers within some of the categories, and 2) to represent the provision of services that was found to be common in the northern communities visited during qualitative data collection in northern Saskatchewan. In the northern subset, 76.6% of the participants identified home care services were available on a daily or weekly basis in their community, 44.2% identified hospital services, and 61.4% identified family physicians. In the southern subset 94.0% of the participants reported home care services daily or weekly in their communities, 84.1% for hospitals, and 92.9% for family physicians.

The availability of daily or weekly mental health services (Table 5.3) were reported by 53.2% of participants in the northern subset and 75.2% of participants in the southern subset. Of the northern participants, 17.2% reported that mental health services were unavailable in their communities, whereas only 10.9% of the participants in the southern subset reported mental health services as unavailable. Specialist services were less likely to be available on a daily or weekly basis in northern communities. The proportion of participants that reported specialist services as unavailable did not differ between the northern and southern subsets.

Table 5.3 Availability of services by north-south location

Variables	Location of Participants			
	North		South	
	n	(%)	n	(%)
Home Care				
Daily or Weekly	443	(76.6)	1912	(94.0)
Monthly	8	(1.4)	7	(0.3)
Bimonthly to Annually	7	(1.2)	1	(0.0)
Service Not Available	120	(20.8)	115	(5.7)
Total	578	(100.0)	2035	(100.0)
Hospital				
Daily or Weekly	246	(44.2)	1694	(84.1)
Monthly	-		-	
Bimonthly to Annually	1	(0.2)	0	(0.0)
Service Not Available	310	(55.7)	321	(15.9)
Total	557	(100.0)	2015	(100.0)
Family Physician				
Daily or Weekly	356	(61.4)	1941	(92.9)
Monthly	154	(26.6)	50	(2.4)
Bimonthly to Annually	46	(7.9)	15	(0.7)
Service Not Available	24	(4.1)	84	(4.0)
Total	580	(100.0)	2090	(100.0)
Mental Health				
Daily or Weekly	304	(53.2)	1500	(75.2)
Monthly	82	(14.4)	225	(11.3)
Bimonthly to Annually	87	(15.2)	53	(2.7)
Service Not Available	98	(17.2)	217	(10.9)
Number	571	(100.0)	1995	(100.0)
Medical Specialists				
Daily or Weekly	29	(5.2)	648	(34.5)
Monthly	79	(14.2)	322	(17.2)
Bimonthly to Annually	216	(38.7)	127	(6.8)
Service Not Available	234	(41.9)	779	(41.5)
Number	558	(100.0)	1876	(100.0)

Note: May not sum to total sample size owing to missing values.

5.2 The Individual Characteristics of the RN

5.2.1 *Comfort Living in a Northern Community*

Comfort living in a northern community was examined in questions related to the participants' satisfaction with their present home community using the summated Community Satisfaction Scale (Appendix J, C31, questions a through k). Comparison of the community satisfaction between the northern and southern subsets using independent samples t-test revealed that the northern participants ($M = 40.09$, $SD = 8.70$) were less satisfied with their home communities than the southern participants ($M = 43.46$, $SD = 8.08$; $t [866.198] = -8.36$, $p < .001$ equal variances not assumed).

Results from questions about the RNs' happiness with their work community and the supportiveness of the community towards the health care agency are found in Table 5.4 and 5.5. A substantial proportion of participants in both northern and southern subsets can be viewed as happy with their community (north = 91.2%, south = 94.7%). Similarly, Table 5.5 reveals that 32.6% of the northern participants perceived the community as very supportive of their health care agency compared to 53.5% of the southern participants. Comparison of the community support for the health care agencies between the northern and southern subsets using independent samples t-test revealed that the northern participants ($M = 4.04$, $SD = 0.91$) were less satisfied with their community support than the southern participants ($M = 4.39$, $SD = 0.81$; $t [2717] = -9.0$, $p < .001$ equal variances assumed).

Table 5.4 Happiness with their work community by north-south location

Variable	Location of Participant			
	North		South	
	n	(%)	n	(%)
I am happy with the community in which I work.				
Agree	356	(60.8)	1555	(72.9)
Somewhat Agree	178	(30.4)	465	(21.8)
Somewhat Disagree	37	(6.3)	88	(4.1)
Disagree	15	(2.6)	25	(1.2)
Total	586	(100.0)	2133	(100.0)

Note: May not sum to total sample size owing to missing values.

Table 5.5 Community supportive of agency by north-south location

Variable	Location of Participant			
	North		South	
	n	(%)	n	(%)
Community is supportive of the health agency				
Very supportive	192	(32.6)	1139	(53.5)
Somewhat supportive	282	(47.9)	772	(36.2)
Neutral	71	(12.1)	146	(6.9)
Somewhat Unsupportive	34	(5.8)	49	(2.3)
Very Unsupportive	10	(1.7)	24	(1.1)
Total	589	(100.0)	2130	(100.0)

Note: May not sum to total sample size owing to missing values.

5.2.1.1 Social Isolation

Although there were no direct questions in the survey addressing social isolation, this concept was explored using questions about the participants' reports of being recognized in public, being asked for advice in the community, and whether these two events bothered the participants (Table 5.6). Analysis of the questions about the participants' interactions with the community, shown in Table 5.7, revealed a larger proportion of the northern participants being recognized in public as compared to southern participants ($\chi^2 [2, N = 2654] = 9.10, p = .003$).

Table 5.6 RNs interactions in the community by north-south location

Variable	Location of Participant			
	North		South	
	n	(%)	n	(%)
Recognized in public by clients				
Agree	498	(84.8)	1556	(75.3)
Somewhat Agree	74	(12.6)	395	(19.1)
Somewhat Disagree	11	(1.9)	79	(3.8)
Disagree	4	(0.7)	37	(1.8)
Total	587	(100.0)	2067	(100.0)
Bothered when recognized in public by clients				
Agree	17	(3.0)	42	(2.1)
Somewhat Agree	82	(14.4)	226	(11.2)
Somewhat Disagree	74	(13.0)	303	(15.1)
Disagree	396	(69.6)	1441	(71.6)
Total	587	(100.0)	2067	(100.0)
Frequently asked for professional advice by clients in public				
Agree	224	(41.6)	773	(36.9)
Somewhat Agree	212	(36.2)	926	(44.2)
Somewhat Disagree	80	(13.7)	268	(12.8)
Disagree	50	(8.5)	127	(6.1)
Total	587	(100.0)	2067	(100.0)
Bothered when asked for professional advice when not at work				
Agree	86	(14.9)	161	(7.7)
Somewhat Agree	149	(25.9)	526	(25.3)
Somewhat Disagree	139	(24.1)	494	(23.8)
Disagree	202	(35.1)	127	(43.2)
Total	587	(100.0)	2067	(100.0)

Note: May not sum to total sample size owing to missing values.

Northern participants were also more likely to be bothered when recognized in public than southern participants (χ^2 [2, $N = 2581$] = 6.05, $p = .014$). No difference was found between northern and southern participants when asked for advice outside of work (χ^2 [2, $N = 2662$] = 3.21, $p = .073$). A significantly higher

proportion of the northern subset reported being bothered when asked for advice in public compared to the southern subset (χ^2 [2, $N = 2655$] = 32.30, $p = .001$).

5.2.2 Challenges in Communication

Challenges in communication were explored by examining the use of interpreters in nursing practice (Table 4.22). The demographic description of the participant subsets identified that 58.3% of the northern subset and 9.9% of the southern subset that used interpreters in their practice. The use of interpreters was further examined in relation to work setting to identify which work settings were associated with the use of interpreters (Table 5.7). The analysis identified that participants in nursing stations (outpost/community health centres) were more often found to use interpreters within each of the northern (63.1%) and southern (36.8%) subsets.

Table 5.7 Work setting by north-south location for nurses using an interpreter

Variable	Location of participant using Interpreters			
	North		South	
	n	(%)	n	(%)
Work setting				
Nursing Station (Outpost/nurse clinic)	216	(63.1)	77	(36.8)
General Hospital/Air Ambulance/Dialysis	66	(19.4)	52	(24.9)
Community Health Agency	18	(5.3)	28	(13.4)
Integrated Facility	8	(2.3)	7	(3.3)
Home Care	6	(1.8)	11	(5.3)
Educational institution/Association/government	5	(1.5)	3	(1.4)
Rehabilitation/convalescent/LTC Facility	3	(0.9)	18	(8.6)
Business/industry occupational health/Self-employed	2	(0.6)	1	(0.5)
Mental Health Centre/corrections/addictions	1	(0.3)	2	(1.0)
Physician's office/family practice unit	1	(0.3)	2	(1.0)
Other	15	(4.4)	8	(3.8)
Total	341	(100.0)	209	(100.0)

Note: May not sum to total sample size owing to missing values.

5.3 Northern Nursing Worklife

5.3.1 *Workplace as an Island*

The survey questions did not allow for the direct exploration of the concept of the workplace as an island. However, questions were selected to add contextual information about nursing practice characteristics that would limit the RNs ability to interact with the community outside of a health care facility. The questions that could provide some understanding about the community versus facility setting of northern nursing practice were those questions that listed the procedures performed in nursing practice. Table 5.8 lists the nursing procedures used in practice for the northern and southern subsets based on the procedure most often reported as performed by the northern subset to least often; listed in rank order for the northern subset. For each procedure (E.1a to E.1x), there was a higher proportion of northern participants who regularly performed the procedure compared to the southern participants. All comparisons were significant at the .001 level except: joint aspiration ($p = .008$) and needle aspiration ($p = .003$). Participants were included in this analysis if they responded to all of the questions about the procedures. The total sample size for each of the chi-square analyses was 2743 with 595 participants in the northern subset and 2148 in the southern subset.

Table 5.8 Nursing Practice Procedures by north-south location

Variables		Location of Participants		χ^2
		North (n = 595) n (%)	South (n = 2148) n (%)	
Dispensing medication	Yes	477 (80.2)	912 (42.5)	265.08***
	No	118 (19.8)	1236 (57.5)	
Immunizations	Yes	468 (78.7)	1010 (47.0)	187.65***
	No	127 (21.3)	1138 (53.0)	
Post-natal care	Yes	468 (78.7)	766 (35.7)	348.01***
	No	127 (23.1)	1382 (64.3)	
Evacuating patients	Yes	449 (75.5)	669 (31.1)	378.98***
	No	146 (24.5)	1479 (68.9)	
Pre-natal care	Yes	446 (75.0)	634 (29.5)	403.07***
	No	149 (25.0)	1514 (70.5)	
Interpreting diagnostic tests	Yes	373 (62.7)	632 (29.4)	222.11***
	No	222 (37.3)	1516 (70.6)	
Performing diagnostics tests	Yes	372 (62.5)	586 (27.3)	254.59***
	No	223 (37.5)	1562 (72.7)	
Direct referral to other professionals	Yes	364 (61.2)	1057 (49.2)	134.44***
	No	231 (38.8)	1091 (50.8)	
Suturing	Yes	362 (60.8)	294 (13.7)	569.34***
	No	233 (39.2)	1854 (86.3)	
Ordering diagnostic tests	Yes	354 (59.5)	484 (22.5)	300.04***
	No	241 (40.5)	1664 (77.5)	
Prescribing medication	Yes	350 (58.8)	234 (10.9)	638.74***
	No	245 (41.2)	1914 (89.1)	
Casting/splinting	Yes	345 (58.0)	453 (21.1)	307.44***
	No	250 (42.0)	1695 (78.9)	

Note: May not sum to total sample size owing to missing values.

(* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

Table 5.8 Nursing Practice Procedures by north-south location (continued)

		Location of Participants		χ^2
Variables		North (n = 595) n (%)	South (n = 2148) n (%)	
Performing pap smears	Yes	343 (57.6)	207 (9.6)	669.95***
	No	252 (42.4)	1941 (90.4)	
Pronounce death	Yes	341 (57.3)	893 (41.6)	46.63***
	No	254 (42.7)	1255 (58.4)	
Management of labor	Yes	257 (43.2)	434 (20.2)	130.66***
	No	338 (56.8)	1765 (79.8)	
Management of delivery	Yes	240 (40.3)	383 (17.8)	134.44***
	No	355 (59.7)	1765 (82.2)	
Taking x-rays	Yes	229 (38.5)	44 (2.0)	690.32***
	No	366 (61.5)	2104 (98.0)	
Audiometry	Yes	218 (36.6)	195 (9.1)	276.72***
	No	377 (63.4)	1953 (90.9)	
Direct referral to specialist	Yes	217 (36.5)	390 (18.2)	90.69***
	No	378 (63.5)	1758 (81.8)	
Pulmonary function testing	Yes	158 (26.6)	227 (10.6)	98.69***
	No	437 (73.4)	1921 (89.4)	
Culturing tissue samples	Yes	124 (20.8)	175 (8.1)	77.29***
	No	471 (79.2)	1973 (91.9)	
Refraction	Yes	78 (13.1)	49 (2.3)	123.72***
	No	517 (86.9)	2099 (97.7)	
Joint injection/aspiration	Yes	17 (2.9)	28 (1.3)	6.9**
	No	578 (97.1)	2120 (98.7)	
Needle aspiration	Yes	15 (2.5)	21 (1.0)	8.57**
	No	580 (97.5)	2127 (99.0)	

Note: May not sum to total sample size owing to missing values.

(* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

Job satisfaction (Appendix J, section F, questions 1 to 30), measured using the summated scale, was included as variable that would indicate the participants' relationship to the workplace in the northern and southern subsets. Results identified that northern RNs ($n = 572$, $M = 142.54$, $SD = 22.11$) were as satisfied ($t [2648] = .056$, $p = .95$, equal variances assumed) with their jobs as southern RNs ($n = 2078$, $M = 142.48$, $SD = 21.56$).

The results of responses to questions about the RNs career plans over the next five years found significant differences between northern and southern participants (Table 5.9). A larger proportion of southern participants (67.7%) reported plans to continue working in the same location compared to the northern participants (41.7%) ($\chi^2 [1, N = 2726] = 133.65$, $p < .001$). A larger proportion of northern participants reported plans to relocate within their current province ($\chi^2 [1, N = 2726] = 20.70$, $p < .001$), relocate to another province in Canada ($\chi^2 [1, N = 2726] = 184.67$, $p < .001$), leave Canada to nurse in another country ($\chi^2 [1, N = 2726] = 45.36$, $p < .001$), go back to school for more nursing education ($\chi^2 [1, N = 2726] = 45.26$, $p < .001$), go back to school for non-nursing education ($\chi^2 [1, N = 2726] = 26.27$, $p < .001$), move because of family commitments ($\chi^2 [1, N = 2726] = 65.43$, $p < .001$), and move from rural/isolated to a large community ($\chi^2 [1, N = 2726] = 93.87$, $p < .001$). There was no significant difference found between the northern and southern subsets for their plans to retire ($\chi^2 [1, N = 2726] = 3.88$, $p < .49$) or between the subset if they reported none of the above career plans in the next five years ($\chi^2 [1, N = 2726] = 0.15$, $p < .0.70$).

Table 5.9 Career plans by north-south location

Variables	Location of Participants		χ^2
	North n (%)	South n (%)	
Next 5 years			
Continue working in same location			
Yes	247 (41.7)	1444 (67.7)	133.65***
No	346 (58.3)	698 (32.3)	
Total	593 (100.0)	2133 (100.0)	
Relocate within current province			
Yes	112 (18.9)	250 (11.7)	20.70***
No	481 (81.1)	1883 (88.3)	
Total	593 (100.0)	2133 (100.0)	
Relocate to another province			
Yes	170 (28.7)	168 (7.9)	184.67***
No	423 (71.3)	1965 (92.1)	
Total	593 (100.0)	2133 (100.0)	
Relocate to another country			
Yes	73 (12.3)	100 (4.7)	45.36***
No	520 (87.7)	2033 (95.3)	
Total	593 (100.0)	2133 (100.0)	
Take further nursing education			
Yes	176 (29.7)	367 (17.2)	45.26***
No	417 (70.3)	1766 (82.8)	
Total	593 (100.0)	2133 (100.0)	
Take further non-nursing education			
Yes	81 (13.7)	150 (7.0)	26.27***
No	512 (86.3)	1766 (93.0)	
Total	593 (100.0)	2133 (100.0)	

Note: May not sum to total sample size owing to missing values.
 (* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

Table 5.9 Career plans by north-south location (continued)

Variables	Location of Participants				χ^2
	North		South		
	n	(%)	n	(%)	
<hr/>					
Next 5 years					
Move related to family					
Yes	95	(16.0)	124	(5.8)	65.43***
No	198	(84.0)	2009	(94.2)	
Total	593	(100.0)	2133	(100.0)	
Move from rural to large community					
Yes	134	(22.6)	177	(8.3)	93.87***
No	459	(77.4)	1956	(91.7)	
Total	593	(100.0)	2133	(100.0)	
Retire					
Yes	107	(18.0)	464	(21.8)	3.88*
No	486	(82.0)	1668	(78.2)	
Total	593	(100.0)	2133	(100.0)	
None of the above					
Yes	17	(2.9)	55	(2.6)	.699
No	576	(97.1)	2078	(97.4)	
Total	593	(100.0)	2133	(100.0)	

Note: May not sum to total sample size owing to missing values.

(* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

5.3.2 Perceptions on Professional Isolation

Professional isolation was examined using participant responses to the location of their workplace as either rural or remote (Table 5.10), whether their work community was accessible only by airplane (Table 5.11), the availability of technology such as the internet (Table 5.12), methods of colleague contact (Table 5.13), and participant perceptions of colleague support (Table 5.14). For the question related to the location of the participants' workplace as remote, a higher proportion of northern participants (82.4%) identified their workplace as remote

compared to the southern participants (22.8%) (χ^2 [1, $N = 2707$] = 714.47, $p < .001$). For rural workplace, the northern participants (68.1%) were less likely to report their workplace as rural than southern participants (91.1%) (χ^2 [1, $N = 2722$] = 202.20, $p < .001$). A higher proportion of northern participants (43.8%) reported their community as only accessible by plane compared to southern participants (3.3%) (χ^2 [1, $N = 2744$] = 719.07, $p < .001$).

Table 5.10 Workplace is rural or remote by north-south location

Variables	Location of Participants		χ^2
	North n (%)	South n (%)	
Workplace Rural			
Yes	391 (68.1)	1944 (91.1)	202.20***
No	183 (31.9)	189 (8.9)	
Total	574 (100.0)	2133 (100.0)	
Workplace Remote			
Yes	486 (82.4)	486 (22.8)	714.47***
No	104 (17.6)	1646 (77.2)	
Total	590 (100.0)	2132 (100.0)	

Note: May not sum to total sample size owing to missing values.
(* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

Table 5.11 Community only accessible via plane by north-south location

Variables	Location of Participants		χ^2
	North n (%)	South n (%)	
Community only accessible via plane			
Yes	261 (43.8)	71 (3.3)	719.07***
No	335 (56.2)	2077 (96.7)	
Total	596 (100.0)	2148 (100.0)	

Note: May not sum to total sample size owing to missing values.
(* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

Table 5.12 illustrates that northern participants (76.2%) reported more access to the internet in the workplace compared to southern (50.7%) participants (χ^2 [1, $N = 2662$] = 121.032, $p < .001$). Table 5.13 presents the findings about

mode of communication that participants used to contact colleagues.

Crosstabulation results indicated that a greater proportion of southern (72.8%) versus northern (64.9%) participants reported colleague contact face-to-face (χ^2 [1, $N = 2691$] = 13.84, $p < .001$). Colleague contact by telephone was not significantly different (χ^2 [1, $N = 2691$] = 2.38, $p = .123$) between the northern and southern subsets. However, colleague contact by email was greater for northern participants (31.4% vs 21.4% in the southern group) (χ^2 [1, $N = 2691$] = 25.50, $p < .001$).

Table 5.12 Internet access in workplace by north-south location

Variables	Location of Participants		χ^2
	North n (%)	South n (%)	
Internet access in workplace			
Yes	446 (76.2)	1053 (50.7)	121.03***
No	139 (23.8)	1024 (49.3)	
Total	585 (100.0)	2077 (100.0)	

Note: May not sum to total sample size owing to missing values.

(* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

Table 5.13 Colleague contact by north-south location

Variables	Location of Participants		χ^2
	North (n = 590) n (%)	South (n = 2101) n (%)	
Colleague contact face-to-face			
Yes	382 (64.9)	1529 (72.8)	13.84***
No	207 (35.1)	572 (27.2)	
Colleague contact by telephone			
Yes	532 (90.2)	1846 (87.9)	2.38
No	58 (9.8)	255 (12.1)	
Colleague contact by email			
Yes	185 (31.4)	449 (21.4)	25.50***
No	405 (68.6)	1652 (78.6)	

Note: May not sum to total sample size owing to missing values.

(* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

No difference (χ^2 [1, $N = 2734$] = 1.16, $p = .282$) was found between the proportions in the northern and southern participants who reported having a support network of colleagues (Table 5.14). Crosstabulation analysis of the disciplines (nurses, physicians, other health professions, non-health professional, or no support) in the participants' consultation or support network identified three categories where the support reported by the participants in the northern and southern subset were not significantly different: nurses (χ^2 [1, $N = 2725$] = 1.16, $p = .282$), other health professionals (χ^2 [1, $N = 2725$] = .82, $p = .366$), and no colleague support (χ^2 [1, $N = 2725$] = 1.16, $p = .282$). By contrast, there was a difference in the proportion of northern participants who reported medicine as part of their support network (north = 76.0%, south = 69.1%; χ^2 [1, $N = 2725$] = 10.68, $p < .001$), and a significant difference in the proportion of northern participants

who also reported non-health disciplines as part of their support network (north = 31.8%, south = 26.1%; χ^2 [1, $N = 2725$] = 7.51, $p = .006$).

Table 5.14 Perception of colleague support by north-south location

Variables	Location of Participants		χ^2
	North n (%)	South n (%)	
Do you have a support network			
Yes	531 (89.1)	1870 (87.5)	1.16
No	65 (10.9)	268 (12.5)	
Total	596 (100.0)	2138 (100.0)	
Support network in nursing			
Yes	466 (78.3)	1629 (76.5)	0.89
No	129 (21.7)	509 (23.5)	
Total	595 (100.0)	2130 (100.0)	
Support network in medicine			
Yes	452 (76.0)	1471 (69.1)	10.68***
No	143 (24.0)	659 (30.9)	
Total	595 (100.0)	2130 (100.0)	
Support network in other health professionals			
Yes	418 (70.3)	1455 (68.3)	0.82
No	177 (29.7)	675 (31.7)	
Total	595 (100.0)	2130 (100.0)	
Support network non-health			
Yes	189 (31.8)	556 (26.1)	7.51**
No	406 (68.2)	1574 (73.9)	
Total	595 (100.0)	2130 (100.0)	
No colleague support			
Yes	65 (10.9)	168 (12.5)	1.16
No	531 (89.1)	1870 (87.5)	
Total	596 (100.0)	2138 (100.0)	

Note: May not sum to total sample size owing to missing values.
(* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

Further, a statistically significant difference was found for the participants' perception of colleague availability on a scale of 1 to 10 (1 indicated that they

perceived colleagues as largely unavailable for consultation when they needed them and 10 indicated they perceived colleagues as very available). Responses to the questions, “Are colleagues available to you for consultation when you need them?” found that the northern subset perceived their colleagues as more available ($M = 7.37$, $SD = 2.32$) than the southern subset ($M = 7.06$, $SD = 2.33$, $t[2689] = 2.93$, $p = .003$, equal variances assumed).

5.3.3 Characteristics of Nursing Practice Roles

Three survey questions were examined that could contribute to an exploration of characteristics of the nursing practice roles in northern and southern communities. Two questions were related to advanced nursing practice roles: 1) whether the participant had facilitated health promotion activities in the community, or 2) had performed nursing practice and decision-making skills at an advanced level. As indicated in Table 5.15, participants in the northern subset more often facilitated health promotion activities in the community ($\chi^2 [1, N = 2862] = 67.84$, $p < .001$) and had performed nursing practice and decision-making skills at an advanced level ($\chi^2 [1, N = 2670] = 163.98$, $p < .001$).

Table 5.15 Characteristics of nursing practice by north-south location

Variables	Location of Participants				χ^2
	North		South		
	n	(%)	n	(%)	
Facilitated health promotion activities your community					
Yes	400	(69.1)	1043	(49.8)	67.84***
No	179	(30.9)	1051	(50.2)	
Total	579	(100.0)	2283	(100.0)	
Performed advanced level nursing practice and decision making and skills					
Yes	377	(65.7)	752	(35.9)	163.98***
No	197	(34.3)	1344	(64.1)	
Total	574	(100.0)	2096	(100.0)	

Note: May not sum to total sample size owing to missing values.

(* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

The final question explored in relation to the characteristics of nursing practice identified that northern nursing practice involves significant demands on the northern RN. Therefore, the Job Content Questionnaire (Appendix J, section G, questions 1 to 15), which measures job strain, was examined to identify differences between the subsets for the sub-scales of Psychological Job Demand and Decision Latitude. Using the t-test for analysis, results identified that there was a significant difference between the subsets for Decision Latitude, but not for Psychological Job Demands (Table 5.16). Results suggest that the participants in the northern subset perceived they had more Decision Latitude, however the Psychological Job Demands were not significantly different for the two subsets.

Table 5.16 *Psychological Job Demands and Decision Latitude by north-south location*

Variables	Location of Participants				<i>t</i>	<i>p</i>
	North (n = 572)		South (n = 2078)			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Psychological Job Demands	34.54	5.98	34.22	5.83	1.196	0.232
Decision Latitude	75.58	9.63	71.00	10.03	9.929	0.001

* equal variances assumed.

5.4 Summary

This descriptive quantitative analysis identified differences in the nature of nursing practice in northern and southern communities. The findings of the analysis support the theory constructed from the perceptions of the qualitative study participants and the understanding associated with dementia care and community caregiving, where nurses in LTC or home care settings were more often in contact with older adults with dementia, and where services that could support older adults with dementia were less often available in northern communities. The findings for the individual characteristics of the RN identified that the northern participants were generally happy with their work community, used interpreters in practice more frequently in small facilities, such as nursing stations or health care centres, and suggest that the participants had concerns related to being recognized and approached in the community. These findings support the participants' perceptions from the qualitative study where a consistently recurring condition in the interview data was the challenges experienced using interpreters in practice. Further, the perceptions surrounding the need for northern nurses to distance themselves from the community can be related

to the northern survey participants' perception of being bothered when asked for advice in public.

Northern nursing worklife findings were as expected results related to the participants' perception of their workplaces as rural and remote, and the proportion of northern participants' reporting that access to their communities occurred more often by plane than in the southern subset. Other worklife findings of interest were the identification of medicine and non-health disciplines as part of their practice support system, the large proportion of procedures used in practice, the perception of the role of the RN in advanced practice, and corresponding positive perception of their decision latitude in their workplaces. These findings can be interpreted as supportive of the perceptions of the qualitative study participants as they reported the heavy clinical demands of their role and the limited time available to community health programs. Further, the qualitative participants reported a high degree of autonomy in their advanced practice roles and both personal and professional satisfaction in assisting their clients to gain self care practices and recover from illnesses.

Methodologically, this secondary analysis yielded useful information about the context of northern nursing practice from which to broaden a perspective on the theory constructed in the qualitative analysis (Morse, 2003). The sequential mixed methods design, where the qualitative findings guided the selection of variables in a large data set, defined the scope of the secondary analysis. The challenge in using a data set designed to collect information about the nature of rural and remote nursing practice, which did not focus on dementia, was to theoretically align the variables with the categories and conditions in the theory.

Although the variables chosen were broadly applied to some of the theory categories, and did not capture all conditions related to an awareness of dementia, the variables did provide contextual information, which was the aim of the secondary analysis in this project. The primary benefit of using this large database for a secondary analysis was the ability to provide some verification of the qualitative findings from the smaller qualitative study, and to combine to enhance this initial exploratory investigation of dementia care in northern nursing practice by providing north-south comparisons which were not available in the qualitative study. The linkages between methods were more meaningful for some concepts than others, but overall the sequential mixed methods design achieved the intended objective.

CHAPTER SIX – DISCUSSION

The purpose of this study was to explore dementia care for older adults in northern Saskatchewan from the perspective of RNs who work in health care facilities (hospitals, long-term care facilities, home care services, and nursing stations) to answer the question: **What do RNs in northern Saskatchewan perceive as key issues and concerns associated with the care of older adults with dementia?** Using a sequential mixed method approach, this study linked the qualitative interview findings from Saskatchewan with a quantitative national rural and remote nursing survey database to develop a broad understanding about northern nursing practice in relation to an awareness of dementia. Through the analysis of the interviews with the northern RN participants, a theory was constructed that provided insight into the conditions surrounding the care of older adults in northern Saskatchewan. The quantitative secondary analysis, using data from the national survey (Stewart et al., 2005) in the multi-method study “The Nature of Nursing Practice in Rural and Remote Canada” (MacLeod et al., 2004), supported many of the conditions identified in the grounded theory analysis about the limited amount of resources in northern Canada for the care of older adults with dementia.

6.1 Theory Development

The goal for the development of a theory was to describe patterns and relationships in the data, and conceptualized the conditions in abstract terms

(Glaser & Strauss, 1967). The theory developed in this study presents one way to understand how RNs working in northern Saskatchewan form their perceptions of dementia. Early on in the study it was identified that some RNs working in the north did not perceive dementia care as one of the primary areas of responsibility for RNs in their practice settings. Therefore, the focus of this analysis was to form an understanding of the conditions that influenced the awareness of dementia and dementia care needs of older adults in their communities for RNs practicing in northern Saskatchewan.

One of the primary reasons identified by the participants in the qualitative study for their limited awareness of dementia, and the limited provision of dementia care, was the small number of older adults residing in northern communities. The small number of older adults within each community, and the limited number of older adults seen by the RNs in their practice, created the perception that the needs of this segment of the population were ‘overshadowed’ by the large numbers of young people in northern communities and the acute nature of health concerns in the younger age groups. This perception of the older adult population as small and ‘overshadowed’ provided a partial explanation for the low priority of dementia care.

A recent Canadian Senate review on mental health care in Canada reported that services and support for older adults with mental illnesses are inadequate and often not accessible to this population (The Standing Senate Committee on Social Affairs, Science and Technology, 2006). The institutionalization of older adults with mental illnesses was found to contribute to the stigmatization of aging and mental illness. Further, the report identified that for the northern Aboriginal

population in Canada access to mental health professionals and specialists services is very limited, and institutionalization removes them from the community.

Statistics about the aging Canadian population have suggested that the percentage of Aboriginal people over the age of 65 years is projected to triple by 2017 as their life expectancy increases (Statistics Canada, 2005). Since a higher proportion of older Aboriginal adults live in First Nations reserves or rural communities and a higher proportion of Aboriginal people live in northern Canada (Statistics Canada), there was a need to explore: 1) how RNs in northern Saskatchewan become aware of older adults with dementia, and 2) the present health care services available to northern older adults, including dementia assessment and caregiving services. An increase in the number of older Aboriginal adults in the north might also increase the number of older adults that may require dementia care.

Using the process of constant comparative analysis (Glaser & Strauss, 1967), conditions were identified in the data that diminished or enhanced the RNs' awareness of dementia. Three broad categories were constructed from these conditions, where each category captured an area of variation in the data that contributes to an understanding of how RNs in northern Saskatchewan develop their perceptions about dementia and dementia care. The result was the construction of a theory that conceptualized conditions identified within northern nursing practice as both insulating and expanding an awareness of dementia.

6.1.2 Insulating and Expanding the Awareness of Dementia in Northern Nursing

Glaser (1978) stated that “a theory must have fit and relevance” (p. 4), be conceptual, and use conceptual metaphors. When using grounded theory for nursing theory development, the conceptual metaphors proposed should also fit and be relevant for nursing as the subject area (Glaser). The conceptualization of conditions affecting the RNs’ awareness of dementia using the terms insulating and expanding, were identified by this researcher as metaphors that fit, were relevant, and provided the ability to confer an understanding about how RNs develop their awareness of dementia and dementia care within the practice of northern nursing. The central tenet of the theory is that the northern RNs’ awareness of dementia is influenced by a number of conditions, and that awareness has implications for the RNs’ capacity to provide care to older adults with dementia.

6.1.2.1 Insulating and Expanding Awareness

Within the process of insulating and expanding, conditions that contributed to insulating the RN from an awareness of dementia were more often conveyed through the data than conditions that contributed to expanding awareness. The concept of insulating grew out of a broad contextual focus on the evolving nature of northern nursing practice. The term ‘isolating’ has historically been associated with northern nursing, particularly in relation to professional isolation and the distance between the location of the northern community and a centre with advanced health care services. The term ‘insulating’ (versus ‘isolating’) was developed in this study as a more applicable current conceptual characterization of

RN practice in northern communities, especially as it relates to dementia care. In this study, many conditions were found to be insulating the RNs' awareness of dementia: the lack of clinical diagnoses of dementia, the language barrier between RNs and older adults, and the limited services specifically directed at the older adult population. The conditions that were found to be insulating an RN's awareness of dementia have also been described in other studies, such as the effects of the language barrier on dementia assessment (Cattarinich et al., 2001). Insulating the RN's awareness affects their capacity to identify changes in cognition and functional ability associated with dementia, or to provide ongoing care to older adults with dementia.

Conditions that resulted in expanding the RNs' awareness of dementia were less prevalent in the data. Increasing the availability of services for older adults in the north was perceived as growing with the ongoing development of northern LTC and home care programs. These programs were found in varying levels of development in all of the northern communities accessed in this study. In one community there was a formalized clinic for older adult health assessment, and in another community older adults were visited by Licensed Practical Nurses (LPNs) in the home care program. As in other studies, the clinical assessment for dementia in the older adult population was not always perceived as an element of the health assessment practice of nurses (Iliffe et al., 2005). Broadening services for older adults was associated with increasing the RN's awareness and capacity to identify changes in cognitive and functional abilities associated with dementia, or to provide ongoing care to older adults with dementia.

The conditions that were found to be involved in insulating and expanding the RNs' awareness of older adults with dementia were grouped into three broad categories: *Dementia Care and Community Caregiving*, the *Individual Characteristics of the RN*, and *Northern Nursing Worklife*. Figure 3.1 (in Chapter Three) illustrates that all three categories of conditions combine to influence how northern RNs' develop an awareness of dementia in their practice settings. The most salient category in the development of an awareness of dementia, and the creation of the theoretical understanding of northern dementia care, was *Northern Nursing Worklife*, followed by the categories *Individual Characteristics of the Nurse*, and *Dementia Care and Community Caregiving*.

6.2 Northern Nursing Worklife

The work settings in which nurses practiced were found to have a key influence on their level of awareness of dementia. The conditions that led to the development of this category were specific to the work environment and how the work environment contributed to insulating and expanding the nurses' awareness of dementia. The worklife conditions were categorized as: *Workplace as an island*, *Perceptions on Professional Isolation*, and *Characteristics of Northern Nursing Worklife*.

6.2.1 Workplace as an Island

In the qualitative study the workplace was conceptualized as a metaphorical island within the community. The RN participants were found to interact with community members primarily within clinical facilities rather than within the northern community itself. The theme "what is coming through the door" described how the work environment concentrated the RN's focus on the

health concerns that were presented and prioritized in the clinical practice setting. Focusing only on issues that present in the health care facility limits the visibility of community health issues, especially for older adults who were reported as infrequently accessing health care services.

Northern nursing worklife issues that were explored in the secondary survey analysis provided context for the theme “what is coming through the door.” Analysis identified that northern RNs perform many procedures that would typically be carried out within facilities. As northern nurses are functioning with a larger scope of acute care skills, they also reported more latitude in decision-making compared to southern nurses. These findings also support the conclusions of other research that the priority given to acute care services limits the attention afforded to public health programs in northern nursing (Roberts & Gerber, 2003).

Conditions that were insulating the RNs’ awareness can be characterized by the organization of nursing work that reduces or prevents the transfer of clinical information from one practice setting to another (e.g., acute care to public health), or when the nature of a practice area becomes all encompassing, where the practice is surrounded by elements that narrow a nurse’s focus. The limited number of health care resources and services in the north (Kirby, 2002; Nagarajan, 2004, Romanow, 2002) and limited variety in nursing positions (i.e., such as LTC or home care) contribute to insulating awareness of dementia for RNs in northern nursing practice.

Most reports on northern nursing identify issues related to recruitment and retention of nurses. Findings from the Aboriginal Nurses Association of Canada (ANAC, 2000) report on the recruitment and retention issues of northern nurses

identified that 60% of participants considered their workplaces as understaffed. Understaffed workplaces contributed to situations that were described as physically, mentally and emotionally taxing, and increasingly stressful when predictable breaks are not provided. When less than a full complement of staff were available, there was an increase in the amount of overtime and routine clinical responsibilities an RN was required to perform, and becomes one of the many ways northern RNs become distanced from the community.

In the qualitative study, participants suggested that understaffing was associated with the use of itinerant or temporary RN staffing. Studies on the recruitment and retention of RNs in northern Canada consistently report on the relationship between nursing turnover and the continuity of patient care (ANAC, 2000). Minore et al. (2005) examined how nursing turnover effected continuity of care in northern Ontario communities. Ongoing recruitment and retention problems resulted in a dependency on itinerant RN staffing. The lack of familiarity of itinerant RNs with the community and clients resulted in clinical consequences that included medication and documentation errors, follow-up care challenges, and a disruption in the relationship and trust between the community and the nursing staff.

Another consequence of the lack of continuity of care associated with the high level of turnover in RN staffing was the “added burden of care for the family and community” (Minore et al., 2005, p. 87). As the burden of care for older adults with dementia is consistently reported in studies of caregivers, increasing the retention of RNs may enhance dementia care and support to caregivers. The participants in the qualitative study noted that consistency in the use of itinerant

RNs, where the itinerant RNs return to the same community, had the potential to increase continuity in care. This suggestion by the participants mirrors recommendations proposed by Minore, who suggested that consistent use of the same itinerant RNs for relief staffing in a community could assist in maintaining continuity in care.

In the qualitative study, understaffed health care facilities, and the resultant increase in the amount of overtime and after hours call, were reported to affect the number of community services performed by RNs. A large proportion of northern participants in the survey reported being on-call as part of their employment (Table 4.21). Consistent with other studies of recruitment and retention, public health and preventative health programming were disrupted or ceased when staffing levels were low (Minore et al., 2005). One participant coined the phrase “trauma and drama” referring to conditions that prioritized acute care as the clinical focus. Factors that reinforced the emphasis on acute care included the autonomy associated with the use of advanced skills and the satisfaction from witnessing the beneficial results of treatment. Acute care treatment contributed to professional job satisfaction because the RNs were able to observe their efforts to increase the health status of their clients, whereas chronic care and health promotion efforts were not as obvious or immediate.

6.2.2 Perceptions on Professional Isolation

Viewing the northern nursing workplace as an island resulted in an exploration of professional isolation. The historical development of northern nursing practice shows a slow progressive decrease in the level of professional isolation. In northern Saskatchewan, nursing practice began as a community

practice where nurses visited the client in the community, in contrast to within a health care facility, primarily related to the early lack of facilities (Saskatchewan Department of Public Health, 1980). Historical documents on Saskatchewan northern outpost nursing practice reported the nature of nursing employment as involving: 1) nurses working alone in small communities, 2) limited ability to communicate in the language of the community, 3) limited interaction with other health care professionals (commonly only by mail), 4) working with limited supplies, 5) isolated from professional collegial networking, and 6) living alone (Saskatchewan Department of Public Health). From this historical perspective outpost nursing became equated with the term ‘isolated posting,’ which meant living and working in a community alone, as an outsider in the community, and away from their home.

As facilities were established clients were encouraged to attend the facilities to address their health care needs (Saskatchewan Department of Public Health, 1980). However, the development of health care facilities did not always result in an increased number of RNs in a community. The RNs were reported to have perceived the development of health care facilities as a “mixed blessing” as their interaction in the community decreased (Saskatchewan Department of Public Health). Decreased interaction between the RN and the community members was stated as limiting the development of knowledge about the health care practices of the community. Therefore, the development of facility-based health care services, combined with the language barrier and limited cultural knowledge of the nurses, added one more layer of isolation between RN and the community.

In the past, professional isolation of the RNs also resulted from the limited communication between the RN and other health care professionals. The first outpost nursing station opened in Manitoba in 1922 staffed with one nurse (Waldram et al., 2006). Over the years, northern health care has grown. There are presently a larger variety of health care professionals working in the north, in contrast to outpost nurses providing all health care services to a community (Waldram et al.). Although northern communities remain geographically distant from large urban centers, access to most northern communities has increased. Presently, northern nursing services in Saskatchewan can be perceived as less detached from specialized urban health care services. Visiting specialist services have developed, and telehealth has been increasingly used to facilitate patient care and communicate health information to health care providers (Muttitt et al., 2004). Therefore, northern nursing practice can not be accurately described using the term 'isolated practice' as RNs are not providing nursing care isolated from communication with other health care providers as they were in the past.

At present, communication using multiple methods, such as the telephone, internet, and telehealth, has the potential to increase the level of communication between northern and southern health care professionals (Muttitt et al., 2005). Of interest in this exploration of variables related to professional isolation was that more of the survey participants in the northern sample had internet access in their workplace, although used email less often than the southern RNs to interact with colleagues. There was no difference in telehealth access in the workplace for northern and southern RNs in the survey, however satisfaction with telehealth was lower for the northern participants.

The findings on internet and telehealth access in the workplace from the survey data suggests that although RNs in the north have access to technology, the use of technology has not become an integrated part of their practice. The present growth of telehealth usage in Canada has attempted to bridge the gap in north-south inequities by increasing the ability of urban health care specialists to have clinical contact without the expense of travel costs (Muttitt et al., 2004). The barriers to the use of telehealth identified by Jennett et al. (2005) were similar to the findings from participants in the qualitative study where participants voiced fears that accompany new technology. The difficulty expressed by the participants in integrating new technology into their practice was related to understaffing and the associated increase in their workloads, which limit their ability to become familiar with the technology.

Minore et al. (2005) reported that northern health care is “nurse dependent” (p. 88). Thus, every effort to increase the knowledge and skills of these professionals through formal and informal educational opportunities could contribute to an increased health status of northern people. As was found in the survey analysis, 76.5% of the northern participants perceived barriers to continuing education. Similar to the analysis by Penz et al. (2007) that looked at the barriers to education for rural and remote nurses, workplace barriers were the most often cited barriers to continuing education: the lack of organizational support or recognition for continuing education, staffing issues to replace RNs attending educational events, and a lack of awareness of educational opportunities. The participants in the qualitative study expressed that the availability of facility-based education events might be one avenue to approach ongoing education.

Participants indicated that the onsite research interviews about dementia and dementia care conducted for this study, exploring a relatively overlooked area of northern nursing practice, gave the topic local relevance and increased their awareness of older adults in their community.

6.2.3 Characteristics of Nursing Practice Roles

Findings from the survey analysis identified that nursing practice in northern communities primarily involved acute care, community health, and primary care practice roles in outpost and small hospital settings, versus home care and LTC. Within these nursing roles, the nurses in the qualitative study suggested that the services that are provided include those mandated by the facility and the community. Although the nurses' roles included the follow-up care of clients with chronic diseases, few of the nurses were involved in caring for the older adult members in the communities that they served. The limited involvement with the older adult population did assist to identify a gap in northern nursing care and the need for further research with nurses and the community: 1) about dementia in the northern older adult population, 2) the need for community education about dementia, and 3) the involvement of community members who can assist nurses to develop an awareness of the health needs of the older adults in the communities. This limited focus on dementia care is not unique to northern nursing. A European forum on dementia identified three prominent barriers to dementia care: 1) dementia was not seen as a priority in healthcare, 2) there is a perception that dementia is not treatable, and 3) dementia is difficult to identify and often associated with normal cognitive loss in aging (Brodaty & O'Connell, 2005).

The findings of the qualitative study were consistent with the literature indicating that assessment of dementia by health care providers is not standard practice (Sternberg et al., 2000). Manthorpe et al. (2003) reported that RNs in different practice areas had varying levels of awareness and knowledge about the presentation of cognitive problems in older adults. Community-based nurses with a mental health focus were reported as more aware of and better able to assess cognitive status in older adults than nurses whose involvement in the community focused on public health concerns. Further, Iliffe et al. (2005) reported that health care professionals who are not routinely exposed to clients who have dementia might not be familiar, or comfortable, with the process of diagnosis.

The practice roles of the participants in the qualitative study were directed by their practice position. In a study by Tarlier et al. (2003), about how experienced outpost nurses describe their role, the authors identified that these nurses saw their role as focused on primary health care principles and the development and maintenance of relationships with the community. In the qualitative study, although many of the nurses were experienced in northern nursing, only one participant specifically stated that primary health care principles directed their practice. In this instance, the focus on primary health care led to the creation of a program for older adults, addressing a gap that this RN identified in the health care services provided in the community.

The statement by Tarlier et al. (2003), that the role of the northern community nurse is “grounded in primary care competency” (p. 180), speaks not only to nursing in the north, but also to northern health care in general. These authors reported that the role of the northern nurse was created within a medical

model, but has evolved as the focus on health care in the country has moved towards a primary health care model. The statement contends that primary care, acute care skill competencies, or the medical model, that has formed the basis of northern health care delivery, needs to broaden and focus on attending to a larger spectrum of health care services.

Primary health care takes a team approach to health services delivery (Saskatchewan Health Services Branch, 2002). In the north, this collaborative team of health care professionals available for collaboration is small. The development of the northern nursing care team is growing, with the addition of home care nurses and the employment of RNs in specialty roles versus the use of RNs in positions to deliver a wider scope of services. Broadening the diversity of knowledge in the nursing team in northern communities is one way to address the gaps in services, such as the limited services for older adults and those with dementia.

6.3 The Individual Characteristics of the RN

The individual characteristics of each RN include the experiences and knowledge that each nurse brings with them to their employment. These qualities are both personal and professional. Together these qualities form the basis from which an RN practices and interacts within the communities in which they live and work. The conditions that described the individual characteristics of the RN were categorized as: *Comfort Living in a Northern Community*, *Prior Nursing Experience*, and *Challenges in Communication*.

6.3.1 Comfort Living in a Northern Community

Although the national survey revealed lower satisfaction with both home and work communities, and lower perceived support of the health care facility by the community, the large majority of participants in both the northern and southern groups were found to have responses on the positive side of these scales. Some participants in the qualitative study suggested that they were more comfortable living in a small northern community because their community of origin was small. This finding is similar to results from a study on rural nurses (Smith, MacDonald, & Schissel, 200) where nurses with a rural upbringing were more apt to work in rural settings. Further, findings from a subgroup of Aboriginal RN respondents in the multi-method study “The Nature of Nursing Practice in Rural and Remote Canada” (Stewart et al., 2005) found that many Aboriginal RNs returned to their community of origin to work (Kulig et al., 2007). It may be reasonable to expect that Aboriginal RNs from small northern communities would be more comfortable living in small First Nations communities where they were raised in contrast to non-Aboriginal RNs who were from a large urban center.

The demographic data from the national survey also contributes information about the level of comfort living in a small northern community experienced by northern RNs. Of the northern participants, 42.9% (versus 21.0% of the southern participants) reported their community of origin as having a population of more than 10,000 people (Tables 8), which is considered an urban centre (du Plessis et al., 2001). As such, almost half of the RN participants might not be as comfortable living in a northern community where there may be limited resources (e.g., amenities for food, shopping, and recreation).

One other interesting issue that requires consideration is that the data can be viewed as suggesting that there is a relative ease of mobility of RNs among the communities in the north, which may lead to a decreased sense of belonging and commitment to the community and to the agency that employs the RNs. In northern Canada, there are a high number of vacant nursing positions (Lemchuk-Favel & Jock, 2004), which increases the ease with which RNs can relocate to a northern community. The findings identified that 70.3% of the participants had been in their positions for less than five years (Table 4.16), 54.5% had been employed by their primary agency for less than five years (Table 4.17), 33.6% expected to stay in their present position for less than one year (Table 4.18), and 27.3% reported that they were licensed to practice in more than one province (Table 4.9). The demographic characteristics of the participants that contributed to the RNs' ability to relocate were the moderate proportion whose marital status was single, divorced, or widowed (Table 4.3) and the substantial proportion of RNs living in the north without dependent relatives (Table 4.4). These data suggest that for a significant proportion of northern RNs, the development of a sense of belonging to the community, and commitment to the agency that they work for, might not be fostered by their employer and may contribute to the transient nature of northern nursing employment. Transient employment has been reported to increase the gaps in programs and health education for elderly northern Métis women in Saskatchewan (Kreig et al., 2007) and limits the ongoing monitoring of clients, which is important in the assessment of dementia.

6.3.1.1 Social Isolation

A certain degree of ‘social isolation’ remains inherent in the lifestyle of nurses living in small northern communities. The findings of the qualitative study identified that the comfort level of the RN in the community was determined by the perception of the degree of social isolation experienced by the RN. Social isolation, developed as a subcategory under *Comfort Living in a Northern Community*, was found to result from relocation to a new community and the maintenance of a social distance from the community to protect professional status. Andrews et al. (2005) referred to the visibility of the RN in a small rural community as one reason for social isolation. RNs working in small communities have been described as ‘highly visible’ and easily identified as ‘the nurse’ by members of the community (Waldram et al., 2006). Caucasian nurses in northern First Nations communities presumably have an increased level of visibility related to their racial difference. Although the ethnicity of all the participants in the northern sample of the national survey is unknown, only 10.5% were of Aboriginal ancestry.

Leipert and Ruetter (1998) reported that the RNs’ perception of their community visibility was related to the frequency with which they were asked for professional advice outside of working hours. Variables that were explored in the survey data analysis indicated that a large proportion of survey participants felt they were recognized in public as a nurse (Table 5.6). This recognition of the nurse in public was perceived in the qualitative analysis as one of the reasons for avoiding socializing in the community. Interview participants also reported being bothered when asked for professional advice in public, which may also contribute

to an avoidance of interactions in the community. As the nursing literature has identified, nurses in rural communities are perpetually functioning in the role of ‘the nurse’ in all their social interactions (Andrews et al., 2005). Nurses in the north commonly live within close proximity to their workplace (Vukic, 1997). This arrangement aids the return of nurses to the workplace after hours when they are on-call. However, this type of living arrangement may contribute to the community’s perception of the nurses as a professional who is always at work.

The themes from Vukic’s (1997) literature review on northern nursing were found to relate well to the data in the qualitative study, and are particularly relevant to this discussion of the findings about the RNs’ perceptions about living in a northern community. Vukic (1997) conceptualized the worklife issues of northern RNs using Goffman’s (1961) classical term ‘total institution’. In a total institution there are two groups of people separated by power and status. In this situation the two groups were the community members and the RNs. The RN can be perceived as having status as a professional with health care knowledge and power in being the access point to medical services. In a total institution, interactions between the two groups are characterized as “often formally prescribed” (Goffman, p. 7). The interactions in the clinical environment between the community and the RNs can be viewed as formally prescribed as the community members approach the RN to meet a health care need and the clinical interaction between the nurse and client is directed by clinical data, guidelines, and resources. Thus, the RN group can be perceived to perform a function for the community and, therefore, need to maintain boundaries in keeping with their practice role.

Some of the participants in the qualitative study perceived that being distanced from the community was necessary to maintain credibility as a professional. Maintaining a distanced approach to the community limited the RN from developing knowledge about the community and the small population of older adults within a community whose needs were ‘overshadowed’ by the much larger population of young people. However, maintaining a distanced approach to the community may be one way in which northern nurses can find time to relax and detach themselves from their perpetual role as ‘the nurse’. Future research might include an exploration of this concept of distancing from the perspectives of gender, age or ethnicity of the RN.

6.3.2 Prior Nursing Experience

The predominant perception of the participants in the qualitative study was that acute care nursing experience provided the necessary skills and abilities needed to work in northern nursing practice. This perception of northern nursing practice is commonly reported in the literature in relation to the ‘expanded role of the nurse’ (Tarlier et al. 2003; Vukic & Keddy, 2002). Additionally, the practice of the rural and remote nurses has been described as requiring the knowledge base of a ‘generalist’ (MacLeod, 1998), or functioning as a physician replacement (Tarlier et al.).

The value of acute care skills in northern health care may be a function of the need to competently address acute care demands with the limited number of nursing personnel in small communities. Hegney et al. (1999) identified that as the size of a community decreases, so does the number and type of health care resources. The resources that are left in small communities, such as the limited

number of nurses who provide health care in small northern communities, then take on a larger role in the delivery of health care and a broader scope of practice.

The concern that arises is whether it is possible for a small number of RNs to provide for all the diverse needs of a community, with only acute or critical care nursing skills. This concern was reflected by the Royal Commission on Aboriginal People (RCAP, 1996), which reported that the health care services delivered to Aboriginal people has not increased the health status of this segment of the population. It is possible that the hiring practice of recruiting RNs with acute and critical care experience has not contributed to the delivery of health care services that meets all the needs of people in northern communities. In review of the findings of both the qualitative and survey data in the present study, services that may not be addressed include those that focus on the older adult population.

The present expansion of nursing services in northern communities to include home care has the potential to change the perception of northern nursing practice and the health status of the people in the north (Health Canada, 2004b). Broadening the types of positions and services provided by RNs in northern communities increases the breadth of nursing knowledge available in a community. With respect to dementia care, the addition of RNs with LTC and home care experience may contribute to the recognition of, and prioritization of, dementia care. Nurses with experience providing services to an older adult population, particularly in community practice, have been found to be more apt to observe and assess for cognitive changes in their clients (Manthorpe et al., 2003). In the qualitative study, participants who had either experience in home care, LTC, or primary health care were more aware of the needs of the older adults in their

communities, compared to the RNs in acute care facility based roles, and provided services to assist in the maintenance of the health of older adults.

More importantly, interview participants who had an understanding of primary health care, and who were skilled at providing health education at an individual and at a community level, had developed services within communities despite the constraints of the current resources. The development of these resources involved an effort by the nurse to collaborate with the community members and leaders to develop community appropriate health care services and education forums, such as the radio-based health education. The ability of RNs to broaden their practice focus with a primary health care orientation, collaborating with the community, and balancing the autonomy of a broad scope of practice and skills, has been reported to develop over time as an RN becomes an experienced northern outpost nurse (Tarlier et al., 2003). The challenge for northern nursing practice is the ability to retain nurses with diverse clinical backgrounds long enough to become comfortable with their wide scope of acute care skill so that they are able to broaden their skills and work within a primary health care model that promotes community health education and development.

6.3.3 Challenges in Communication

As previously stated, all the interview participants noted that if they could speak the language of the community their ability to provide care to the older adult population would be enhanced. The language barrier was reported as a significant element in dementia assessment, diagnosis, and care that was insulating the RNs' awareness of dementia. As in other studies (Sternberg et al., 2000) the interview

participants identified that family members would need to report concerns that an older adult was having problems to initiate an assessment. However, RNs further identified the language barrier as limiting their ability to interact with older adults and therefore decreasing the potential for early identification and treatment.

One of the Aboriginal RN participants in the qualitative study noted that there was no word for dementia in the Cree or Dene language. This participant suggested that illnesses were not labeled in the Cree language. This difference in the construction of the meaning of disease is an important dimension for the ongoing development of northern dementia care and dementia education. As there is no term for dementia, health care professionals need to be able to converse in the language of the community and develop an understanding of illness and disease from the perspective of the community members if they are to provide care in a meaningful way.

The historical development of English as the language of communication in northern health care is not well documented. Presumably, as more English-speaking professionals moved into the northern communities, the language used to deliver services increasingly became English and correspondingly, the use and need for interpreters grew. Currently, English has become the primary language of health care services delivery in the north, which continues to support a colonial orientation of nursing practice where the nurse is viewed from a position of power related to medical knowledge and their ability to provide access to medical treatment. Although this is not a study of the colonial nature of northern nursing practice, interview participants noted that there is no requirement for nurses to learn the language of the people in the community where they work. The nursing

literature recommends increasing the number of Aboriginal nurses and other professionals as one way to address the concerns related to language and culture (ANAC, 2000). In addition, nurses should be encouraged and supported by their employers to learn the language of the community. One example of encouraging Aboriginal language development has been the integration of the Inuit language and culture as a part of nursing education at the Arctic College in Iqaluit, NWT (Bourque, Lonsdale & Brown, 2006).

The north-south data in the survey study identified that northern participants used interpreters in their practice much more often than southern nurses (Table 24). Of the participants who used interpreters, most were working in nursing stations or outpost settings (Table 35). These findings support the perception that a large proportion of the northern nurses do not speak the language of the community. The use of interpreters for dementia assessment may be necessary (Cattarinich et al., 2001), although an unknown in the practice of northern nursing is the frequency with which family members are used for interpreting, or the level of training needed to enhance the translation of medical questions into Aboriginal languages. Future investigations should be performed to explore the use of family members for translation as well as the effect of the language barrier on the socialization of nurses in northern communities.

The language barrier in northern nursing practice can be viewed as an integral element insulating the northern RN from the community. It is important to acknowledge that the inability of the nurses to speak the community language distanced the nurse from becoming a part of the community and decreased their ability to understand health values from the perspective of the community. Further,

language barriers between health professionals and their clients have been reported to have an effect on the quality of care and length of illness, as well as increasing the stress on the health care professional who is providing services because of the risks associated with miscommunication (Bernard et al., 2006).

Gerish, Chau, and Sobowale (2004) explored primary care nurses' use of interpreters in practice and identified that when interpreter services are inadequate there is a reliance on family members to interpret rather than advocating for trained interpreters to assist in health care services. The use of family members for interpretation was described as having a "negative impact on social relationships" in the families (Gerish et al., p. 412). Further, the lack of interpreter services created reluctance on the part of clients to seek health care services. Constraints in interpreter services in northern Saskatchewan may also have the potential to contribute to a reluctance of older adults to access health care services, which may additionally contribute to the limited visibility of older adults in the clinical practice of RNs who work in northern health care facilities.

6.4 Dementia Care and Community Caregiving

The category *Dementia Care and Community Caregiving* identified that dementia care involves more than providing services to older adults diagnosed with cognitive difficulties and their caregivers. The findings of this study support the work of other researchers (Iliffe et al., 2005) who have suggested that RNs in all specialties that provide services to older adults need to have a basic understanding of dementia to recognize subtle alterations in cognition and functional ability, initiate referral for assessment, provide education and support for caregivers, and coordinate care planning to address increasing levels of care.

The findings also address the need for nurses to have a cultural understanding about aging within the population that they serve. The conditions were categorized as: *Dementia Assessment and Diagnosis*, *Dementia Education*, and *Community Caregiving*.

6.4.1 Dementia Assessment and Diagnosis

There appears to be agreement between the literature and the findings from the qualitative study, that early identification of dementia most commonly occurs when family members, or other individuals living in close proximity to an older adult in the community, observe changes over an extended period of time (Sternberg et al., 2000). The qualitative study also supports research findings where family members, who are often the primary source of information about an older adult's behavior patterns, were perceived as hesitant to bring forward their concerns to health care professionals because of the stigma associated with dementia and a perception by family members that a decreased level of cognition corresponds to a decreased sense of autonomy for the older adult (Iliffe, Manthorpe, & Eden, 2003; Wilkinson & Milne, 2003). Further, the findings also support the concern reported in the literature that cognitive decline may only be identified secondary to a health crisis that brings an older adult in contact with the health care system (Boise et al., 2004; Borson et al., 2006).

The limited awareness of dementia identified in the interviews of northern RNs in Saskatchewan was not entirely surprising given the national context of limited accessibility of services for older adults (i.e., home care, hospitals, physicians, mental health professionals, and specialists) in the north compared to the south identified from the secondary analysis of the survey data. One study in

the United Kingdom, surveying physician attitudes about early recognition found that primary care physicians' hesitation in diagnosing dementia may be associated with a perception that the effectiveness of treatment is limited and that there is a potential for misdiagnosis (Milne, Woolford, Mason, & Hatzidimitriadou, 2000). In a follow-up survey study four years later, using a sample of physicians from the same geographical area, results identified a higher degree of support for early assessment than found in the initial survey (Milne, Hamilton-West, & Hatzidimitriadou, 2005). Differences in the results were partially attributed to an increase in the accessibility of services (e.g., specialty services for diagnosis, support services for older adults) and the policy emphasis that occurred in the time between the surveys, which supported early recognition of dementia. These findings suggest that if dementia policy and services can be developed for northern health care, the potential exists to increase the recognition and support of older adults with dementia and their caregivers, and increase referral for diagnosis.

Two other elements of the assessment and diagnostic process for dementia that were consistent with reports in the literature concerned the use of interpreters and assessment tools. Similar to the findings of Kristjansson et al. (2003) and Kaufert and Shapiro (1996), the challenges that were reported by the participants who used interpreters included the potential for the translator to withhold information out of respect for the older adult. Although the use of interpreters in general can be challenging, the underlying issue is that there is a language barrier that affects communication between the client and the nurse, which is a concern for health care providers when assessing and monitoring the cognitive and behavioral changes in older adults. Only one of the participants in the qualitative

study was able to converse in Cree or Dene. This participant perceived her ability to communicate in the patient's language as giving her an advantage over her colleagues. Indeed, all of the participants noted that if they could speak the language of the community their ability to provide care would be enhanced, especially with the older adult population. Therefore, the language barrier is one element in dementia assessment, diagnosis, and care that was insulating the RN from an awareness of dementia.

In addition to the language barrier, the qualitative study also identified that dementia assessment and diagnosis involved the understanding of an older adults' cultural orientation, cultural norms and values, the expression of behaviors associated with cognitive decline, and the effect of culture on the clinical assessment of dementia (Dilworth-Anderson & Gibson, 1999). The Diagnostic and Statistical Manual (DSM-IV-TR) of the American Psychiatric Association (APA, 2000) describes the diagnostic criteria for a diagnosis of dementia, including the identification of cultural and education features that might influence results of dementia testing. A challenge for professionals involved in the diagnostic process, including those who initiate referrals for assessment, is to develop knowledge surrounding the cultural understanding of dementia for the client, their family, and the larger community to which the client belongs (Gallagher-Thompson, 2006).

Further, culture and language have been identified as significant in the creation and use of diagnostic screening tools in northern Canada (Hall et al. 1993). With the large number of Aboriginal languages spoken in northern Canada, language poses a significant issue in the creation of an assessment tool. Current research into the development of new neuropsychological screening tools is

beginning to address this area of dementia assessment. One assessment tool that uses pictures to assess semantic memory, The Grasshoppers and Geese Test (Lanting et al., 2006), is one example of a neuropsychological test that addresses cultural and geographical aspects in cognitive testing using culturally and geographically relevant pictures.

In the qualitative study, the participants did not perceive the assessment and diagnosis of dementia as a routine element in the care of older adults in northern nursing or medical practice. The participants identified that within the assessment and diagnostic process, the role of the RN consisted of the collection of observations and communication of their concerns to a physician. However, developing an awareness of the potential for cognitive and other dementia related changes in older adults requires both knowledge of dementia and its subtypes, interactions with older adults, and RN involvement in health care services focused on the needs of older adults residing in a community (Manthorpe & Iliffe, 2007).

Some of the participants in the qualitative study were not familiar with the Mini Mental State Exam (MMSE) or other assessment tools, nor were many of the participants aware of specialty resources for dementia care. Consistent with the findings of Iliffe et al. (2005) who reported that community mental health nurses were more aware of cognitive changes in their clients than other community-based RNs, the community-based RNs and LPNs working in home care, and the Community Health Representatives (CHRs) who work primarily in northern communities, were seen as more frequently interacting with older adults and therefore more aware of their cognitive status. Improving education about dementia assessment, and enhancing communication between health care

providers about alterations in cognition and other symptoms of dementia, could help in the identification of changes in cognition and increase support to older adults and their family caregivers. Further, increasing professional and community education about dementia could also help to bridge the gap between the way members of a small northern community understand aging and dementia and the way that acute care facility-based health care professionals perceive and provide support for dementia care services.

Because older adults with dementia are cared for in the community or in a LTC facility, northern RNs in primary care facilities are likely to be unfamiliar with behaviors associated with dementia, insulating them from developing knowledge and experience with dementia assessment, diagnosis, and resources. Few of the participants in the northern sample of the national survey reported working in LTC or home care work settings or nursing positions. The majority of northern participants reported their primary areas of practice as acute care, community health, or primary care. The predominance of these areas of practice in both samples in the present study supports the finding that northern RN positions are more focused on acute health care service delivery than services for chronic or debilitating health care concerns such as dementia.

Although Iliffe et al. (2003) have suggested that clients perceived as needing an assessment might be referred to a specialist and therefore not diagnosed in a primary care practice, no specialty resources were located in northern Saskatchewan to assist in the diagnosis of dementia. One participant identified the Rural and Remote Memory Clinic in Saskatoon (Morgan et al., 2005) as a resource and another participant identified a behavioral consultant in a

southern community as a resource, but most of the participants were not aware of any dementia specific resources in the province. Further, an important finding was the participant reports that the diagnosis of dementia was not found on clinical records even when an older adult or LTC client was perceived as having dementia.

The secondary analysis of the national survey data revealed that fewer northern nurses reported dementia as a client characteristic or reported an incident of aggression with a client diagnosed with dementia, compared to RNs in southern settings. These results support the perception that the prevalence of dementia is lower for northern people, as suggested by Hendrie et al. (1993), or that older adults with dementia are not as visible in northern communities. Further, the proportion of the population that is in the older adult age range in the north is smaller than in the southern communities, thus southern RNs are more apt to be in contact with older adults with dementia, as suggested by the participants interviewed in the present qualitative study.

In summary, the findings of both the qualitative and quantitative studies suggest that dementia may be under-reported in these northern communities. Limited documentation of dementia as a diagnosis decreased the visibility of dementia as a concern for northern nursing services, as antidotal discussions with community members identified older adults with potential cognitive and behavioral changes unknown to the RNs. Limited documentation of dementia as a diagnosis may also contribute to the limited reference to dementia reported in national health indicator documents. There is a need for further research on the prevalence of dementia in the north: 1) in relation to the increasing rates of cardiovascular disease and diabetes, the association of these conditions with

cerebral vascular accidents, and the potential for cognitive and behavioral function changes, and 2) in relation to the limited data collected in national studies on health concerns that includes people living on First Nations Reserves.

6.4.2 Dementia Education

Most of the northern nursing literature documents that there are many barriers that affect the ability of nurses to access educational opportunities (Kosteniuk et al., 2006; Kulig et al., 2006; Tilleczeck et al., 2005). Silverman et al. (2001) found that barriers to education (e.g., travel distance and staffing) resulted in the need for RNs to prioritize their educational activities by focusing on prominent health issues observed in their practice. As dementia was not perceived as a clinical problem of significance, dementia education was not perceived as relevant. The participants noted that if they were to regularly provide care to an older adult with dementia, then an understanding of dementia and the associated nursing care and support services would become necessary.

The participants in the qualitative study reported that the licensed practical nurses (LPNs) and community health representatives (CHRs) they worked with were the primary health care providers to older adults in the north. The LPNs and CHRs were community members who were knowledgeable about the people in the community and the history of the community. The participants in the study suggested that education about dementia should be directed towards the LPNs and CHRs if dementia was to be identified or addressed in the north. Targeting LPNs and CHRs for dementia education may well be a very practical approach to disseminating information, as the difficulties in recruitment and retention of RNs in the north has been a perpetual issue (Minore et al., 2004; Minore et al., 2005).

Kreig et al. (2007), in their exploration of health services access for elderly northern Métis women, found that difficulty in RN recruitment and retention created gaps in services and challenges in the continuity of health education. One potential solution to this issue may be to increase the knowledge base of local people from the community (in collaboration with the existing regional health educators) so that there is continuity in community education that addresses health issues in the north. This is especially important in relation to the older adult population, given the language and cultural barriers that exist between health care professionals and older adults.

Education programs for CHRs are continuing to develop. The National Indian and Inuit Community Health Representative Organization have plans to initiate a process for standardizing the training of CHRs and for identifying CHR competencies and career paths (NICHRO, 2006). It would, therefore, be an opportune time to add dementia-related content to these educational programs.

Literature reviewed for this project included a document by Health Canada (1998) titled *Reaching out: A guide to communicating with Aboriginal seniors*, that presented the ways in which health program information is accessed by Aboriginal seniors. The three most prominent methods that Aboriginal seniors were reported to use for accessing health information are: 1) word of mouth, commonly through communication with family members, 2) local community radio broadcasting, and 3) newsletters, if the senior had a working knowledge of the English or French language. The qualitative study identified only two RNs in different northern communities who were using the radio to distribute health information. These RNs perceived the radio to be an effective method for relaying

information to the community; however, dementia specific information was not presented by radio in either community. None of the participants in this study had access to written information about dementia that they could distribute.

The document *Reaching out: A guide to communicating with Aboriginal seniors* recommended the use of ‘community helpers’ and ‘local contacts’ to disseminate information to seniors using the three preferred modes of communication (Health Canada, 1998). ‘Local contacts’ and ‘community helpers’ identified in this study were the LPNs and CHRs who were working in their community of origin. As these paraprofessionals have pre-existing relationships and trust with community members, enhancing collaborative relationships between RNs and the community helpers may assist in increasing their knowledge about dementia assessment, diagnosis, and care. Enhancing collaborative relationships might be an effective means for increasing knowledge about dementia within northern communities and contribute to the RNs’ understanding about the cultural meaning of illness, aging, cognition, and dementia for older adults in the communities they serve.

6.4.3 Community Caregiving

Family and community caregiving was an important concept identified by the participants in this study. Consistent with the concept of *filial piety*, presented by Gallagher-Thompson (2006) as the cultural responsibility of a family to care for their elders, the participants in the qualitative study perceived the families in northern communities to be very supportive of their older adults. Some participants reported that family, community, and community support were all elements of community caregiving for older adults.

Most of the participants in the qualitative study did not perceive that they were presently providing care to older adults with dementia. However, they did comment on concerns related to caregiver distress, underreporting of behavior and memory problems, and the potential for higher levels of family conflict related to larger family networks. Similarly, Gallagher-Thompson (2006) suggested that professionals needed to be aware of these concerns when interacting with communities that value filial piety. Further, the themes of caregiver distress, underreporting of memory problems, and family conflict also appear in much of the literature surrounding dementia care (Gallagher-Thompson, 2006). The participants in the qualitative study suggested that these issues were similar to those in southern Canada. Further exploration of filial piety is needed to develop an understanding of dementia in northern communities.

The social capital model for older adults, presented by Keating et al. (2005), provides one perspective from which to view the resources for older adults in northern communities. This model views social capital from the perspective of personal, community, and policy networks that are available to provide resources and support to older adults. One previous study about caregivers of older adults with dementia in northern Ontario found that from the perspective of social capital there are few resources for caregiver support and respite in northern communities (Loos & Bowd, 1997).

The personal networks that provide social, physical, and emotional support for older adults in the qualitative study were perceived as strong by the participants, as were the community supports. Informal community supports however, were perceived as changing as more young people move away from their

communities for education and employment opportunities, creating changes to the large extended family in northern communities. This change in family structure may lead to the need for more formal supports in the community for older adults in the future.

Social capital, in the form of formal community networks, includes home care, respite, and LTC services. Study participants identified that there were limited formal services for older adults in their communities. Few northern communities visited in this study had LTC facilities. In communities with a LTC facility, none were organized with dementia care units. As there were no specialized resources available to keep older adults with dementia in their home communities, older adults in need of these services were sometimes relocated to southern communities for care. Relocation decreases the older adult's personal social network and family contact. Previous studies on the relocation of Aboriginal dialysis clients from the north to southern health care facilities reported changes in social relationships, decreased sense of control over decisions regarding their health care, as well as financial concerns regarding housing and travel (Salvalaggio et al., 2003).

The third area of social capital for older adults concerns policy networks (Keating et al., 2005). In all of the communities visited, this level of social policy was not evident. As dementia was not seen as a priority in northern health care, the development of policy networks to assist older adults with cognitive problems can be described as limited. However, the focus on older adults in Aboriginal communities is growing, as evident by the National Aboriginal Health Organization's emphasis on continuing to explore seniors' health issues (NAHO,

2006). At present, policy in this area is in its infancy. Policy networks have the potential to develop with the expansion of home care services in the north and the desire of the growing population of northern older adults to be cared for in their communities by their families (Van Liempt, 2007).

6.5 Strengths and Limitations

A strength of this research project is in the exploration of a focused practice area of northern nursing that has not been previously examined. Within the qualitative study, limitations include the small population of northern RNs in Saskatchewan from which a sample of willing volunteers could be drawn. The use of a mixed method approach to the study helps to address this limitation by providing a large theoretical sample of northern RNs, and a comparative sample of southern RNs, with which to continue the exploration of the concepts and conditions associated with insulating and expanding the awareness of dementia.

6.5.1 Research Design

The sequential mixed methods research design used in this study was an effective methodological approach for the investigation of RNs' perceptions of the care of older adults with dementia and dementia care services in northern Canada. Both the qualitative and quantitative analyses focused on the perception of Canadian RNs using self-reported data from interviews and questionnaires respectively. The complimentary results from each analysis provide a foundation from which to pursue further exploration into the care of older adults with dementia in northern communities and the clinical practice of northern nursing. The qualitative method of grounded theory identified the issues and concerns for northern nurses in relation to dementia care and lead to the construction of a theory

that helps to explain and understand the conditions associated with the awareness of dementia and the care of older adults with dementia in northern Saskatchewan. The quantitative method, using a secondary analysis of national survey data, extended the scope of the conditions found in the theory.

In keeping with the sequential QUAL → quan design (Morse, 2003), the qualitative analysis was completed prior to the quantitative analysis. The completion of each method independently simplified the methodological focus for each analysis and decreased the potential for any “mixing” of assumptions. This research design, where the categories and conditions from the theory guided the selection of the variables, decreased the ambiguity surrounding the choice of variables from the large data set. The challenge in the use of this design for the research project concerned the integration of the research findings from both of the methods as the categories had conditions that overlapped.

Overall, the choice of a sequential mixed methods approach to explore RNs’ perceptions of dementia and dementia care in northern Saskatchewan did assist in accomplishing the goal of constructing an understanding about northern nursing practice in relation to dementia care. The theory and the comparative survey analysis together highlight the challenges involved in the distribution of northern dementia care services and resources, compared to southern RNs, than would have been identified in separate analyses. The choice of the sequential versus a concurrent design for the analysis enabled the categories and conditions from the theory to guide the variable selection in the quantitative data. This design provided a focused selection of variables from the large survey data set.

6.5.2 *Qualitative study*

This study used a constructivist approach to grounded theory (Charmaz, 2006). A constructivist approach contends that each grounded theory project provides only one interpretation of the situation under study, and that the theory constructed was developed through the researcher's "past and present involvements and interactions with people, perspectives, and research practices" (Charmaz, p. 10). As such, it needs to be clearly stated that my past and present understanding of northern nursing practice as an RN influences the concepts presented, interactions with the participants and northern RN colleagues, interpretation of northern nursing practice literature, and the method of research used in this study.

There are strengths and limitations to any research method. One of the strengths of grounded theory research is the ability to interact with participants who can provide experiential knowledge about the research problem. A related benefit of using interviews as a tool for accessing a small population such as northern RNs, who have rarely been asked to contribute in research projects, was the ability to impart a sense of validation for their important role in the provision of northern health care services. Another strength of this method is the contribution of participants who are knowledgeable informants, towards the generation of theory that contributes to an understanding of their view of the problem studied.

The sampling method used for the qualitative study was guided by the theoretical assumption that an RN's knowledge of older adults with dementia and dementia care would occur more frequently in communities with LTC facilities.

As sampling progressed into communities without LTC facilities, but with either home care or other services for older adults, the participants contributed a broader perspective on dementia care within a community. Therefore, the theoretical sampling method also strengthened the selection of participants from different practice areas and increased the variation in clinical perspectives represented in the data.

One limitation in the design of this qualitative study was that it did not use member checking to confirm the findings. The high turnover of nurses in northern communities and the cost of travel to collect data were identified as factors that would affect transcript review and member checking in this study. Therefore, other procedures, such as analytical discussions with supervisors, were used to ensure rigor and trustworthiness in data collection and analysis (Lincoln & Guba, 1985).

6.5.3 Quantitative secondary analysis

The strength of the secondary quantitative method was the ability to use descriptive statistics to explore issues in dementia care in northern nursing and to compare elements of northern and southern nursing practice. The major limitation in the analysis was that the national study survey data was not designed to collect data on the care of older adults with dementia. However, analysis of the survey data contributed contextual information about the clinical practice of northern RNs in relation to a specific health challenge and the care provided to a specific client group.

The aim of the sampling method for the secondary analysis was to create a theoretical group of northern participants from the national survey data set based on northern geographical location and the population size of the participants' rural

and remote community. The most notable limitation to the sampling method for the secondary analysis concerns the parameters for geographical location of the participants. Challenges were encountered with placing the survey participants into the northern or southern groups based on the geographical parameters of the north-south line of McNiven and Puderer (2000) that was used to create the division between northern and southern Canada. Each participant's postal code was matched to a census division and then placed into one of the two groups. The census divisions did not always fall neatly above or below the north-south line. Further matching of the population of each of the census divisions, using the Statistics Canada Census Dictionary (Statistics Canada, 2001b) definition of north, assisted in the placement of each census division that was near the north-south line into either the northern or southern subset. The resulting sample can only be considered a theoretical representation of the population of northern and southern RNs. However, the strength of the survey sampling (Stewart et al., 2005) was in the stratified random sampling and the full population sampling in the remote northern territories and outpost settings.

In 2002, the Canadian Institute for Health Information (CIHI, 2002) published a report on RNs who worked in rural and small town Canada. The Registered Nurse Data Base (RNDB) represented the total population of nurses, in all provinces and territories, working in rural and small communities in Canada during the registration year of 2000. The participants in the survey, overall, were representative of the population of rural RNs in Canada as compared to population data from the RNDB (Stewart et al., 2005). Demographic findings of the CIHI report were found to be similar to those of the participants in the national survey:

average age of 44.95 years (42.9 years in RNDB), 98.4% were female (RNDB = 95.2%). 27.0% had a bachelors degree (18% in RNDB), 50.7% were employed full-time (RNDB = 49.6%), 20.8% of nurses in rural Canada had more than one employer (RNDB = 17.7%). Therefore, an important strength of the present study was the sampling of survey participants based on the definition of rural and small town population (du Plessis et al., 2001).

There are limitations to the use of large data sets for a secondary analysis. As previously mentioned, the national data set used was not designed to collect data on dementia care in northern Canada. Another limitation was that not all of the conditions in the three theory categories could be addressed using the variables in the data set. Most notably, the variables chosen to explore conditions such as social isolation and community integration had to be addressed from a broad context as the survey questions could not contribute information specific to these conditions.

6.6 Integration of Findings

The mixed methods sequential QUAL → quan design (Morse, 2003) for this project provided a guide for the discussion of the results of the qualitative and quantitative studies. In the research design, the selection of variables from the national survey database was led by the three categories of conditions from the theory, *Dementia Care and Community Caregiving, Individual Characteristics of the RN, and Northern Nursing Worklife*. Therefore, the discussion of the findings from the quantitative method was integrated into the discussion of the qualitative findings that led the project.

Combining the findings of two separate methods of analysis in a mixed methods design challenges both the researcher and the readers of the project. The researcher needs to first develop the ability to analyse and communicate the findings of each method consistent with the language and assumptions of each methodology. Secondly, the integration of the findings needs to be presented in a format that provides the combined results of a large amount of data in a way that leads to an understanding of the problem the project is addressing. The readers of mixed methods research can be challenged in having an understanding of one of the methodologies used in the project, but not the other. It becomes the researcher's responsibility to clearly state how each method was used for the reader of the mixed method research and to present the findings in an organized format that builds on the reader's understanding of the findings from each method.

The "theoretical drive" for this project was inductive, led by the qualitative study and supported by the secondary quantitative analysis. Inductive exploratory projects have been stated to benefit from mixed methods designs where findings from one method enhance and broaden the understanding of the other (Creswell, 2007). Although the grounded theory analysis of the participants' perceptions of dementia provided an understanding of the conditions that affect the awareness of dementia for northern RNs, the descriptive analysis of the quantitative survey data broadens the understanding of the conditions, increases support for policy development, and contributes to the development of future research. Therefore, the combined findings from the qualitative and quantitative studies provided a more complete picture of the conditions that affect the RNs' level of awareness of dementia than could be achieved by conducting separate studies.

6.7 Implications

The overall aim of this study was to explore the perceptions of RNs working in northern Saskatchewan about dementia and dementia care. The results of this research project contribute to: 1) an understanding of the challenges for RNs in dementia care in northern Saskatchewan, 2) information for policy and program development for nursing practice in small northern communities, and 3) the New Emerging Team (NET) project “Strategies to Improve the Care of Persons with Dementia in Rural and Remote Areas” (Morgan et al., 2005). Findings identified that there was limited awareness of older adults with dementia by RNs working in northern communities and that there were few services and resources for older adults in northern Saskatchewan, including those related to dementia care. The primary reason for the limited awareness of dementia by RNs can be related to the conditions within the three categories of the theory: *Northern Nursing Worklife*, *Characteristics of the Northern RN*, and *Dementia Care and Community Caregiving*.

6.7.1 Implications for Practice

The gaps that are created in nursing care, with unequal representation of nursing specialties in northern communities, decreases the ability to recognize and address other health care issues such as dementia care. As the older Aboriginal adult population in Canada is projected to increase (Statistics Canada, 2005), there will be a need for increased emphasis on developing services and resources for older adults. Two of the communities visited for this project had programs and services for older adults. However, RNs in surrounding communities may not be aware of the resource innovations created in neighboring communities. Increasing

the communication between RNs in northern communities may assist in the development of older adult resources in the north, such as resources for the care of older adults with dementia.

Administrative responsibility for management of nursing staffing and relief staffing in northern communities has been a large and ongoing challenge.

Recruitment and retention issues in northern Saskatchewan, and throughout the country, are a perpetual issue. However, given the repeated suggestion by research findings that consistency in staffing may improve the continuity of care in small northern communities (Minore et al., 2005), efforts need to be made to explore staffing models that support the continuity of care, especially in relation to older adult services, resources, and support for older adults in need of dementia assessment and care.

Although nursing practice in small northern communities has been focused on a medical model and the management of acute care services, a primary health care model that looks for gaps in the services was found in this study to be an effective model for developing nursing services for older adults in small northern communities. Essential in a primary health care approach to nursing care is an element of client education. As was identified by interview participants, the use of the local radio for health information education was a practical method of dispersing information to the community. The use of the community radio-broadcasting to provide health information could also be an interesting area for further research.

Nurses who work in the north should be encouraged and supported by their employers to learn the language of the community. Although it may not be

reasonable for all nurses to become fluent in a First Nations language, a working knowledge of the language that would enable an RN to conduct initial interview questions with older adults would be beneficial. Attempts to learn the community language by RNs would also display an element of respect for the community and the culture of the people.

Finally, RNs in northern settings need to be supported in integrating new technology into their practice. Employers may need to address workload and staffing arrangements to increase the RN's ability to become familiar with internet and telehealth technologies. The use of the internet and telehealth for patient care continues to grow. Preparing nurses to use this technology in client care increases their ability to address patient care needs and increases the RN's acquisition of technical knowledge that is increasingly becoming necessary for northern nursing practice.

6.7.2 Implications for Research

The findings of both the qualitative and quantitative data suggest that within the small older adult population in northern Canada, there is either a low prevalence of dementia within northern Aboriginal people, as suggested by Hendrie et al. (1993), or that there are a limited number of older adults with dementia who have had a formal documented dementia assessment and diagnosis. Future research that involves community members in dialogue about older adults, and with older adults, would assist RNs in developing an awareness of the factors that affect how a culture different from their own understands dementia. Important to the development of social capital for older adults with dementia in northern

communities is further exploration of a community's understanding of cognitive impairment in aging for northern people.

As stated in the discussion, the limited RN involvement with the older adult population identified a gap in northern nursing care and a need for further research with nurses and the community: 1) about dementia in the northern older adult population, 2) the need for community education about dementia, and 3) the involvement of community members who can assist nurses to develop an awareness of the health needs of the older adults in northern communities. There is also need for further research on the prevalence of dementia in the north: 1) in relation to the increasing rates of cardiovascular disease and diabetes, the association of these conditions with cerebral vascular accidents, and the potential for cognitive and behavioral function changes, and 2) in relation to the limited data collected in national studies on health concerns that includes people living on First Nations Reserves. Targeting LPNs and CHRs in future research project for dementia care and community education would be a practical approach to developing and disseminating information about dementia. Involvement of RNs in this type of research is needed, however, the difficulties in recruitment and retention of RNs in the north, an issue that will not be resolved in the immediate future, presents a challenge for RN participation in research projects. Focusing on the LPNs and CHRs who work in northern communities may allow for more continuity in the development and sustainability of research relationships between the community and the researcher in the north.

As previously stated, understanding dementia from the perspective of members of northern communities could enable the initiation of a dialogue that

may have the potential to contribute to: 1) the development of relevant assessment tools, 2) professional education, 3) assessment and diagnostic processes, and 4) the development of community care initiatives such as community day care programs that could assist older adults with dementia. Participatory research that involves the development of dialogue between the community and the RNs could assist in the creation of community-specific programs that address older adult needs. Further, dialogue between these two groups may result in a mutually beneficial understanding of each others' cultures as each community, and each RN, brings unique elements to the discussion including an understanding of: 1) filial piety in northern communities, 2) the community's perception of the nurses as a professional who is always at work, and 3) a way to support nurses in learning the language and culture of the community.

In order to initiate a dialogue between the community and the RNs about the care of older adults, staffing models that support the continuity of care need to be explored. As understaffing or inconsistencies in staffing arrangements have been reported to increase the gaps in programs and health education, an exploration of models that support consistency in care would benefit both the community and the nursing work environment and northern nursing worklife. Exploration of staffing models would include investigations into the needs and concerns about staffing for full-time, part-time, and temporary RNs, as well as other professionals providing care in the community.

Comfort living in a northern community was a theme generated in the grounded theory analysis. Further research into what creates comfort for nurses living and working in northern communities may also contribute to the

development of staffing models that support continuity of care. Although increasing the number of Aboriginal RNs working in small First Nations communities may increase the level of comfort of the RN in the community, and address the issues associated with culture and language barriers, further research is needed on the experiences of Aboriginal nurses working in their home communities. Research into comfort working in a northern community may also include an exploration of the concept of distancing, by the RN from the community, from the perspectives of gender, age or ethnicity.

6.7.3 Implications for Health Care Policy

The low priority of dementia and dementia care, although an issue that needs to be addressed in northern nursing practice, is potentially a concern that needs to be addressed generally within northern health care. The leading priorities of health care policy in northern Saskatchewan at present were not found to include a specific focus on the older adult population. Diabetes, hypertension, cancer and addiction are the dominant concerns for health care delivery based on the incidence of these health concerns and the need to address lifestyle factors (Health Canada, 2005). Although there is no denying the importance of the need to increase public health services to affect the mortality and morbidity associated with the incidence of these life-threatening diseases, there appears to be limited focus on the health status of older adults who do not have a pre-existing chronic condition.

The National Aboriginal Health Organization (NAHO, 2006) has identified the exploration of the needs of older adults as one of their aims. As nurses play a pivotal role in northern health care, nurses need to become aware of the findings of

the NAHO studies, and support the incorporation of these findings into policies that guide their practice. It has been ten years since publication of the Health Canada document, *Reaching out: A guide to communicating with Aboriginal seniors*, however, many of the methods that were suggested as necessary to reach older adults, such as using the radio for health information and education, are only sporadically used in northern communities. Developing policy that supports the development of multiple methods of delivery for educational programs aimed at all age groups in a small community, would include a focus on the older adult population and assist in increasing an awareness of dementia for the community and the RNs.

The analysis of the research findings, from the perspective of social capital policy networks, suggests that community governance, and provincial and federal governments need to examine the social and physical needs of northern older adults with the aim of drafting policies that provide for local support to meet their needs in the north. The large geographical area that spans the north of Canada poses unique challenges for older adults who need to access specialty services. The centralization of specialty health care services in a larger northern centre or in southern cities, although capitalizing on scarce resources, have implication related to financial and social support for older adults. Telehealth use for specialty service consultations, as integrated into the New Emerging Team (NET) project *Strategies to Improve the Care of Persons with Dementia in Rural and Remote Areas* (Morgan et al., 2005), increases the northern older adults access to dementia assessment and diagnostic services as well as assisting in the delivery of information to the older adult, their family, and health care providers. Expansion

of this model of service design, and policy that supports the further development and integration of telehealth service delivery in northern communities for older adults may assist to increase the awareness of dementia.

The current Canadian Nursing Association (CNA, 2002) framework for advanced nursing practice guides the development of the nurse practitioner (NP) role in the Canadian health care system. The focus of the NP role at present is in the area of primary care. Although the role includes the provision of care to all age groups with a focus on health promotion, there has been a limited direction on the development of a geriatric practice specialization for the NP in Saskatchewan. Future policy, practice, and research into the development of NPs in LTC, home care, and geriatric specialties may assist in increasing the awareness of dementia within the older adult population. Continuing education for NPs should include access to cognitive assessment skills training, which may provide another avenue for dementia assessment given the scarce resources in northern Canada.

In summary, there are many areas of practice, research, and policy that are in need of exploration to assist in the development of an awareness of dementia in northern nursing practice. Exploration of dementia in northern communities identified that the concepts of aging, dementia, cultural understanding, language barriers, and nursing roles and responsibilities in the care of older adults vary from community to community, and between types of facilities. Although NAHO (2006) has identified that exploration of the needs of older adults is one of their aims, nursing researchers need to continue to contribute to the development of knowledge about nursing practice in northern Canada, as health care delivery in this area of our country is ‘nurse dependent’ (Minore et al., 2005).

6.8 Conclusion

Scientific advances that increase our understanding of dementia continue to advance at a fast pace. However, our understanding of how people, or cultures, come to know dementia and care for older adults with dementia is still in need of further exploration. As the Canadian Study of Health and Aging (CSHA) predicts that the prevalence of dementia is expected to increase to approximately 778,000 potential cases by 2031 (CSHA Working Group, 2000), there is a need to explore dementia and dementia care needs inclusive of the northern inhabitants of our country.

Only a small number of participants in the qualitative study reported that they provided care to older adults with Alzheimer disease or were aware of older adults with dementia in their northern communities. Participant awareness of older adults with dementia appeared to develop from a concern for older adult wellness, interaction with older adults, and knowledge of dementia gained through past nursing experience. The lower percentage of older adults in First Nations communities potentially had an effect on their visibility within the community by RNs, in contrast to the population aging seen in southern communities. However, through the analysis of the interviews, the key issues and concerns the RNs most often associated with insulating their awareness of older adults with dementia involved: 1) the limited senior-specific services and resources in northern Saskatchewan communities, including those related to dementia care, 2) the hiring practices of northern RNs based on acute care knowledge and skill and, 3) their limited ability to communicate in the Cree and Dene language with older adults in their clinical practice.

Comfort with living in a northern community, based on the large number of factors that can contribute to or detract from an RN's level of comfort, may be a significant factor in insulating an awareness of dementia in the older adult population. Social isolation limits the RN from developing knowledge about the older adults in a community. The language barrier interferes with communication for the assessment of cognition in older adults by RNs. Further, cultural differences between the RN and the community may create difficulties in assessing the behavior of older adults. Together these challenges support the need for Aboriginal health care workers, RNs, LPNs, and CHRs, who can speak the language, have a sense of belonging and commitment to the community, and can assess older adults in their homes and in their social interactions in the community. Dementia care knowledge and service should evolve as the number of older adults in northern communities increases and with continued development of home care and community elder care resources and facilities. The involvement of RNs, with the LPNs and CHRs, in elder care programming will help to increase community knowledge of dementia and the assessment of cognitive functioning. Increased RN involvement in these programs should increase the level of interaction between the community and the RN, expanding the level of awareness of dementia in their practice.

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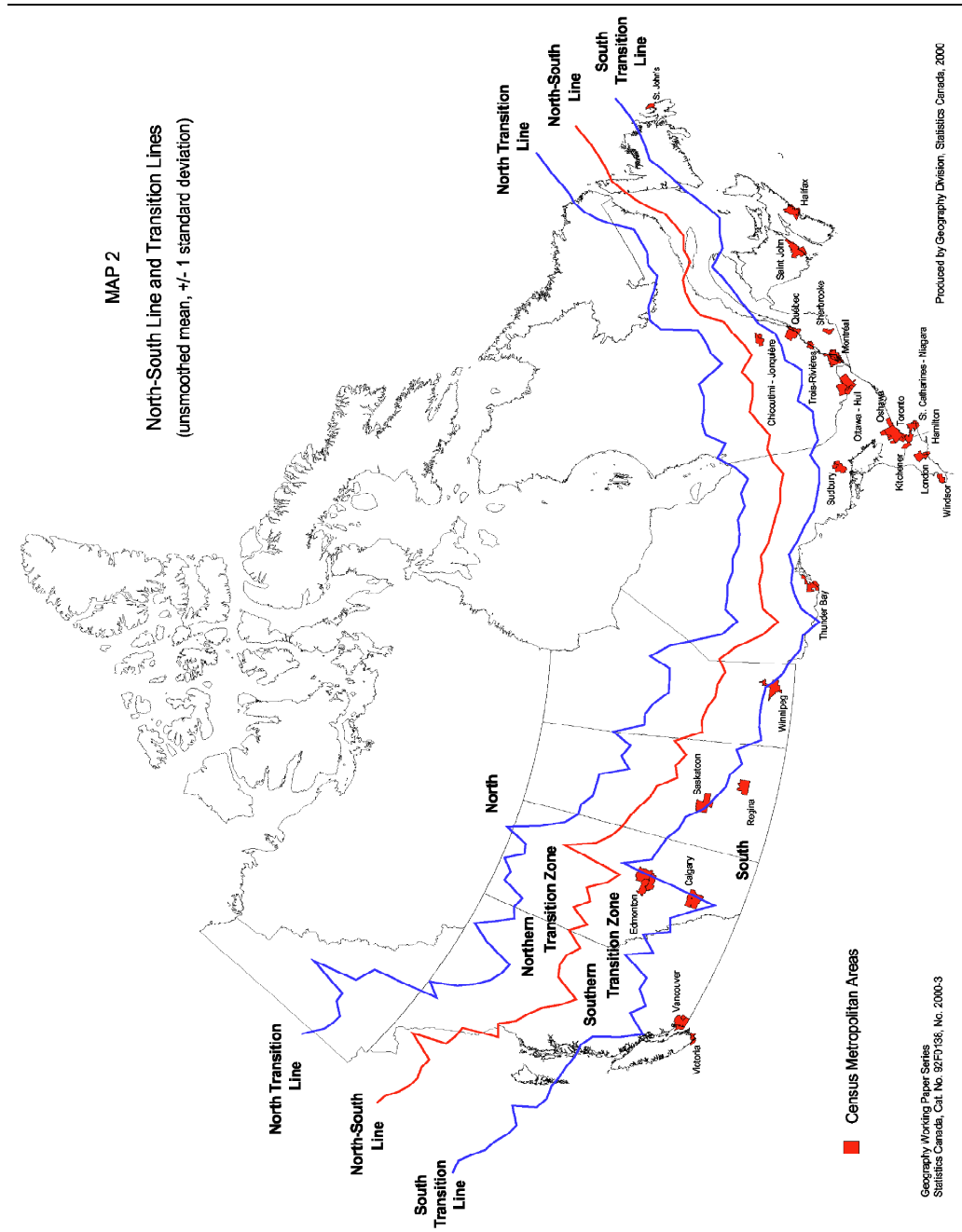
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Appendix A

North-South Map



Appendix B

Dementia Subtypes

Alcohol Related Dementia

Alcohol related dementia (ARD) is a dementia subtype that can result from prolonged ingestion and dependence on alcohol. Oslin, Atkinson, Smith and Hendrie (1998) identified criteria for a diagnosis of alcohol related dementia as including a diagnosis of dementia after 60 days of abstinence, preceded by at least 5 years of significant alcohol use (35 drinks/week for men and 28 drinks/week for women). Cognitive decline related to a high level of alcohol consumption typically occurs not longer than 3 years post usage. A diagnosis is supported by the occurrence of alcohol related organ damage (e.g., gastrointestinal tract, liver, kidneys, pancreas, or cardiovascular disease), peripheral neuropathy, and after 60 days of abstinence cognition and neuroimaging shows improvement.

Oslin and Carey (2003) reported that a limited amount of research has focused on ARD. Their research on ARD identified the need for support for abstinence in the older adult to decrease the potential for disability, and suggested that an increasing the amount of ARD research to assist in diagnosis and treatment of cognitive impairment. Further, Hulse, Lautenschlager, Tait, and Almelda (2005) suggested that alcohol, as well as tobacco, benzodiazepines and other illegal drug use might also contribute to cognitive impairment in later in life.

Alzheimer's Disease

AD is a progressive neurodegenerative disorder that has a strong association with advancing age and cerebral vascular changes such as neurofibrillary tangles and senile plaques (Förstl, 2005). The DSM-IV-TR (APA,

2000) lists the subtypes of dementia as early (before the age of 65 years) or late onset (after age of 65 years), and as occurring with or without behavioral disturbances. The most common subtype is reported as late onset, and the prevalence reported as higher among women (APA). Risk factors that have been investigated include family history of AD, lower educational attainment, gender, history of depression, estrogen hormone replacement therapy, head injury, smoking, hypertension, heart disease and stroke (Gauthier, Panisset, Nalbantoglu, & Poirier, 1997). A family history of early onset AD increases the likelihood of developing dementia compared to the general population (APA).

The Global Deterioration Scale of Reisberg, Ferris, Deleon, and Crook (1982) described the typical progression of AD in seven stages. The initial stages, one and two, of the syndrome are associated with no memory problems or general forgetfulness with normal findings on neurological examination. Stages three and four related to the ability to clinically detect deterioration from the individual's previous level of cognitive functioning. Individuals in these stages experience increased difficulty at work and a decreased ability in short term memory and performance of complex tasks. Stages five through seven are associated with increasing deterioration in orientation and self care abilities progressing to speech loss, incontinence, and behavioral changes. The later stages of deterioration often result in increased care needs that lead to institutionalization.

Dementia with Lewy Bodies

The Third Canadian Consensus Conference on diagnosis and treatment of dementia (Rockwood et al., 2007) supported the continued use of the clinical criteria from the 1996 International Workshop of the Consortium on Dementia

with Lewy Bodies (DLB) (McKeith, et al., 1996). McKeith et al. suggested that a consensus on the diagnostic term used to report DLB was needed to provide researchers and clinicians the ability to further develop knowledge about the heterogeneity of the dementias. It was reported that AD “probably accounts for 50 to 60% of cases of early dementia in elderly patients, and VaD has recently been considered responsible for most remaining cases, occurring alone or in association with AD” (McKeith et al., p. 1114).

Cunningham and Archibald (2006) provide the simplest description of Lewy Bodies as “tiny spots containing deposits of a protein called alphasynuclein” (p. 53) located in the brain stem or cortex (McKeith et al., 1996). As in the APA (2000) definition of dementia, DLB is diagnosed when an individual's cognition and social functioning show a progression in decline with or without memory impairment in the early stages (McKeith et al.). Core features of DLB are “Fluctuating cognition with pronounced variations in attention and alertness. Recurrent visual hallucinations that are typically well formed and detailed. Spontaneous motor features of parkinsonism” (McKeith et al., p. 1115). Other features that McKeith et al. include in the diagnostic picture of DLB are frequent reports of falls, episodes of syncope (temporary loss of consciousness with spontaneous recovery), sensitivity to neuroleptic medications (adverse reactions), delusions, hallucinations, and physical activity during sleep states in response to vivid dreams (McKeith et al., 2005). As syncope, falls, and other features can be suggestive of other disorders, possible diagnosis of DLB were suggested as determined only after investigations into other causes such as a stroke. Other current concerns regarding the diagnosis of DLB is the association with Parkinson

disease with dementia (PDD) where McKeith et al. (2005) suggest a “1-year rule between onset of dementia and parkinsonism for DLB” for consistency in moving forward research into DLB (p. 1865).

Frontotemporal Dementia

Frontotemporal dementia (FTD) is a term that refers to dementias that affect the “prefrontal cortex and connected sub-cortical structures” (Stewart, 2006, p. 23). Research and clinical studies on Pick disease has lead to the differentiation of subtypes of FTD based on clinical presentation that concerns behavioral or language deficits (McKhann, et al., 2001). Stewart (2006) lists common causes of FTD including VaD, Pick disease, AIDS dementia complex, head injury, carbonmonoxide poisoning, and normal pressure hydrocephalus. Some research suggests that normal pressure hydrocephalus (problems in cerebrospinal fluid absorption resulting in dilatation of the ventricles) may be underrecognized in the elderly as clinical presentation may resemble features associated with Parkinson disease (i.e., gait disturbance), dementia (i.e., memory problems), and urinary incontinence (Boschert, 2004; Byrd, 2006).

The behavioral presentation of individuals with FTD commonly involves early and progressive personality and executive function changes versus changes in language, motor skills, and object recognition (Stewart, 2006). Behavioral changes can include impulsive behavior or sexual disinhibition, compulsive behaviors and distractibility, and typically occur without changes in memory (McKhann et al., 2001). The language presentation of FTD also involves early and progressive changes, again commonly without changes in memory. Clinical syndromes associated with language presentations of FTD are progressive non-

fluent aphasia (PA) and semantic dementia (SD) (Neary et al., 1998). Language changes that characterize PA include difficulty in speech, expressing thought, word finding, and with reading and writing although understanding of words is commonly well maintained (Neary et al.). SD is characterized by difficulties in naming objects or people, ability to understand concepts or the meaning of words, while maintaining a moderate ability to read and write, and speak fluently (Neary et al., 1998). As memory impairment is not indicated in the criteria for FTD, the Third Canadian Consensus Conference on diagnosis and treatment of dementia (Rockwood et al., 2007) recommended that a diagnosis of dementia not be strongly associated with impairment in memory.

Vascular Dementia

Pathological features associated with VaD are sundry and complicated by the range of diagnostic criteria (Cosentino et al., 2004). VaD is commonly recognized in cerebral vascular accidents (e.g., stroke). The occurrence of small vessel disease that leads to cognitive deterioration is difficult to differentiate from AD (Reed, 2004). The DSM codes both VaD and AD separately when they co-exist under the diagnostic criteria for Dementia Due to Multiple Etiologies (APA, 2000). The term vascular cognitive impairment, versus VaD, also appears in the literature as not all cerebral vascular changes result in memory loss, suggesting that VaD become a clinical syndrome under an overarching term of vascular cognitive impairment (O'Brien, 2006).

Costentino et al. (2004) presented a system of three criteria for describing the variations seen in VaD that they suggested as a potential method to discern VaD from AD. The first criterion relates to the inability of an individual to

perform complex tasks (executive functions) and difficulty with visual constructions. The authors associate difficulties in these areas of neurological functioning as more indicative of VaD, and language and object recognition difficulties with AD. The second set of criteria pertains to neuroradiological examination and the differences in white and gray matter seen on MRI scans. An increase in white matter involvement was suggested as associated with VaD versus AD. Criterion three involves the clinical risk factors for vascular disease such as hypertension, heart disease, and diabetes. This set of criteria for VaD was suggested as complementing existing diagnostic procedures and to further development of diagnostic schemes to differentiate between the dementias by mortality, cognitive and physical decline, and behavioral disturbances.

Mild cognitive impairment

As inquiry into the identification of the clinical presentation and pathophysiology of dementia in the older adult population increases, correspondingly, investigation into normal aging, and cognitive decline in aging, and the identification of early indicators of cognitive decline have become of interest to researchers and clinicians. “Mild cognitive impairment (MCI) and cognitive impairment no dementia (CIND) are controversial emerging terms that encompass the clinical state between elderly normal cognition and dementia” (Chertkow, et al., 2007, p.1). Recent research has explored the potential connection between MCI and an association with the progression of cognitive decline to dementia and the ability to develop treatment modalities to decrease or prevent cognitive decline (Bruscoli & Lovestone, 2004).

A review of the classification of MCI in a paper presented to the Third Canadian Consensus Conference on Diagnosis and Treatment of Dementia indicates that the definition and diagnosis of MCI and normal cognitive function in aging are evolving (Chertkow, et al., 2006). Research studies reviewed by Chertkow et al. suggested that “between 19% and 50% of MCI individuals progress to dementia (usually Alzheimer Disease) over three years” (Cherkow, et al., p. 2). As MCI has been considered a risk factor for AD, where a key feature is memory loss, amnesic MCI has become an area discussed in the literature on MCI (Petersen, 2001), although non-amnesic MCI has also become a research interest for investigations into prodromal states of other causes of dementia (Gauthier et al., 2006). Criteria for MCI include: 1) the assessment of an individual as having a change in cognitive status but not to a degree that a diagnosis of possible dementia can be suggested, 2) activities of daily living are minimally impaired, and 3) reports of cognitive decline by the individual and an informant together with objective measures identifying decline (Winblad, et al., 2004). Since MCI is seen as a possible precursor to dementia, research efforts that focus on the ability to standardize assessment of cognition and the identification of MCI subtypes will assist in developing treatments for “specific forms of cognitive impairments and dementia” (Petersen, 2004, p. 193).

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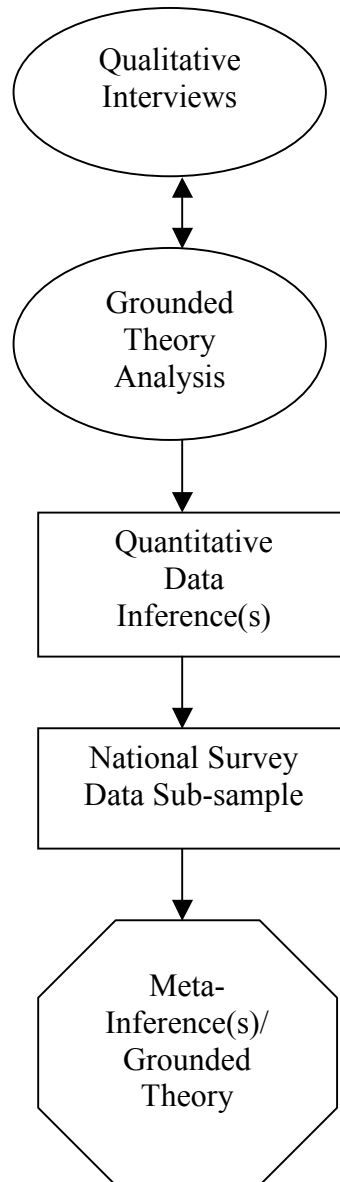
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Appendix C

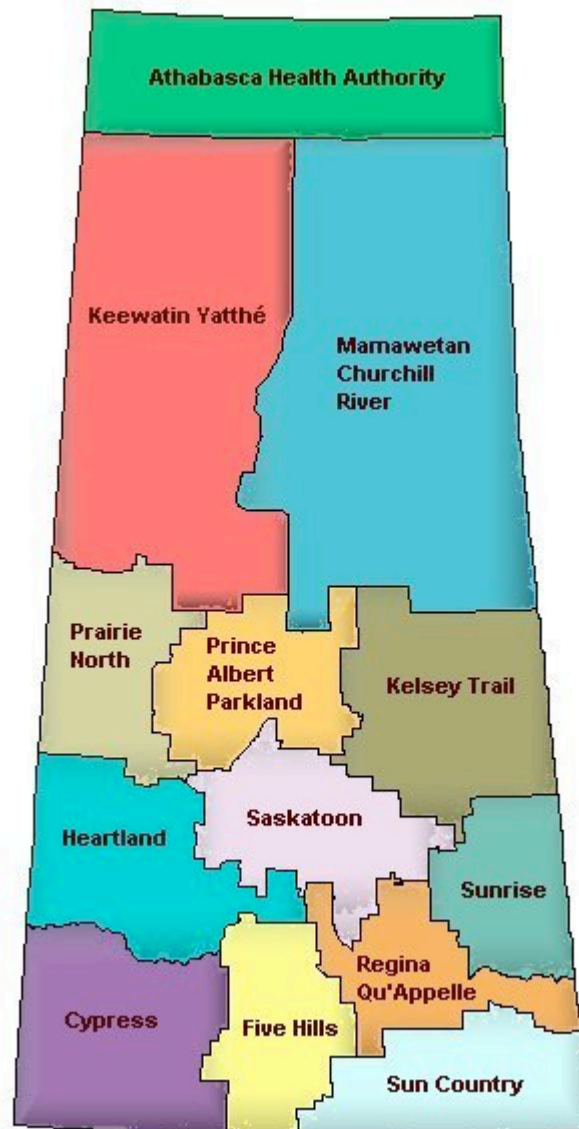
Sequential Mixed Method Design

Purpose: To explore the experiences of Registered Nurses (RNs) who provide services to older adults with advanced dementia in northern Saskatchewan.



Appendix D

Saskatchewan Health Authorities Map



http://www.health.gov.sk.ca/ph_rha_map.html

Appendix E

Consent Form

You are invited to participate in a study entitled “An Exploration of Dementia Care in Northern Saskatchewan: The Perspective of Northern Registered Nurses.” Please read this form carefully, and feel free to ask any questions you might have.

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Purpose and Procedure: The purpose of this study is to explore the perceptions of northern nurses working in institutions or community settings regarding their work experiences with cognitively impaired older adults. The results of this study may benefit nurses in rural and remote Saskatchewan by extending understanding of factors associated with the care of older adults with cognitive impairment in northern Saskatchewan and the practice of nursing in this unique setting.

This study will involve participating in an interview lasting 1 – 2 hours and the completion of a brief questionnaire. The interview will take place at a location of your choice. The interview will be tape recorded and transcribed verbatim. The researcher may contact you in person or by telephone up to twice within the 6 months following the interview to further clarify any questions that the researcher may have. These follow-up interviews or discussions will also be tape recorded and transcribed. The questionnaire is to be completed by you at the end of the first interview and given to the researcher.

Potential Risks: There are no known anticipated risks to participating in this project. At any time during the interview you may choose not to answer questions that are asked by the researcher, and you also have the choice at any time during your interview to request that the interview end. Your employer provides an Employee and Family Assistance Program that can be accessed if you need follow-up or support. If this occurs, you have the option of withdrawing from this study.

Potential Benefits: Benefits to participating in this project include enhancing awareness of dementia assessment, dementia care services, and the needs of registered nurses (e.g., education about dementia assessment, services, and resources) in northern communities within the province of Saskatchewan. Findings of this project will identify the perceptions of nurses about their dementia caregiving experiences and their perceptions of the prevalence of dementia that may result in an increased awareness of dementia and the needs of nurses for information on dementia assessment, services, and resources. The results of this project will provide valuable information regarding nursing work in northern Saskatchewan and the nature of dementia care in this unique practice setting.

Storage of Interview Transcripts: The interview audiotapes, transcripts, and questionnaires will be stored in locked filing cabinets in Mary Ellen Andrews' office at the University of Saskatchewan, during the project. After completion of the project all of the data from the project will be stored, for a period of five years, at the University of Saskatchewan in a locked file cabinet by the researchers supervisors Dr. Norma Stewart and Dr. Debra Morgan, and then destroyed by shredding. The consent forms will be stored separately from the interview data and questionnaires in a locked file. The identification number on the consent will be used on all project documents.

Confidentiality: The information you provide will be used as part of the researcher's written doctoral thesis. Direct quotes may be published in scientific journals, published reports, and conference presentations, although you will only be identified by either an identification number or as one of the participants. The name of the facility in which you work, your employer, or your position title (other than Registered Nurse), and the name of your community will be removed from the interview transcript and all reports. The information gathered from the interviews will be referred to as collected from Registered Nurses working in communities within northern Saskatchewan.

Data will be presented in an aggregate form so that it will not be possible to identify individuals. Your name will be known only to the researcher to provide confidentiality and will never appear on any written or presented material. Please do not place your name on any documentation that is completed by you in this study, such as the questionnaire.

Right to Withdraw: Your participation is voluntary and you can withdraw from the study at any time without penalty of any sort. If you choose to withdraw from

the study the audiotape, interview transcript, and questionnaire will not be used, and will be destroyed. You will be advised of new information pertaining to this project that may change your decision to participate.

Questions: If you have questions or concerns about this study, please feel free to ask at any point. You are free to contact the researcher Mary Ellen Andrews (306-966-8523), her supervisors Dr. Norma Stewart (306-966-6254), and Dr. Debra Morgan (306-966-7905) at any time and you can call any of the above numbers collect. You can also call 1-888-966-8523 and leave a message for the researcher at any time and she will return your call. If you have questions regarding your rights as a participant you can call the Behavioral Research Ethics Board (collect at 306-966-2084). This study has been approved on ethical grounds through the University of Saskatchewan Behavioral Sciences Research Ethics Board in June of 2005.

Consent to Participate:

I, _____, have had the opportunity to read and discuss the study purpose and my participation with the researcher. I have had the opportunity to ask questions and receive answers regarding my participation in this study in a manner that is acceptable to me. I have read and I understood this consent form. I understand that I can withdraw consent at any time, and I have received a copy of this consent for my personal records. I freely consent to participate in this research project.

Participant's Signature

Date

Researcher
Mary Ellen Andrews RN
PhD Candidate

Date

I wish to have a written summary of the results. ☐ Yes ☐ No

Appendix F

Letter of Intent

April 2005

Research Project entitled: "An Exploration of Dementia Care in Northern Saskatchewan: The Perspective of Northern Registered Nurses."

Dear Facility Administrators and Nursing Supervisors,

My name is Mary Ellen Andrews. I am a registered nurse and a PhD student with the College of Nursing, University of Saskatchewan. The focus of my dissertation research is exploring dementia care within the older adult population in northern Saskatchewan from the perspective of RNs who work in northern health care facilities. As little research information exists specific to registered nurses or dementia care in the north of our province, the results of this project will provide valuable information regarding nursing work in northern Saskatchewan and the nature of dementia care in this unique practice setting.

This project is linked to a larger study titled, "Strategies to improve care of persons with dementia in rural and remote Areas. This project aims to increase the availability, accessibility, and acceptability of services for assessment and management of dementia and the support for caregivers of persons with dementia in rural and remote areas in Saskatchewan. Telehealth and an evaluation of a distance education program for caregiver are two of the strategies the study is using to explore dementia caregiving and dementia assessment and care services for people in rural and remote areas.

The intent of my project is to interview RNs about their perception on dementia care in northern Saskatchewan. Participation in this project is not dependent on having cared for an individual with dementia. However, I am interested in interviewing RNs who are either presently, or have in the past, worked with clients who have cognitive impairment (e.g., memory loss, behavior concerns) or dementia, or have provided services to this client population personally or indirectly. Care given to individuals with cognitive impairment or dementia could have occurred in LTC, acute care or community settings.

Presently I am looking to recruit volunteers by displaying a poster in a location visible to the RN staff in your facility. With your approval I will mail copies of the attached poster for display in your facility. Display of the poster for a period of approximately six months would be appreciated, to facilitate viewing by all staff during the summer vacation months. Pamphlets that explain this project, and a stamped addresses envelop, have been included in this package. I would be pleased if these items could be distributed to your nursing staff. The poster and pamphlet will serve as a method of confidential contact between the RNs and myself. Distributing the pamphlet and displaying the poster are the only

requirements this researcher has regarding the participation in this project by your facility.

I will arrange visits to your community for interviews at times that are convenient for your agency and the RNs who wish to participate. I will organize my own travel and communicate this to you as far in advance as possible.

I thank you in advance for your consideration of my request.
Sincerely,

Mary Ellen Andrews RN MN

Appendix G

Poster

A research study exploring dementia in the older adult population in northern Saskatchewan is looking for participants. If you are an RN and are willing to volunteer to share your experience please call the researcher, Mary Ellen Andrews, a Doctoral student with the College of Nursing, University of Saskatchewan, at 966-8523. Results of this study will inform an understanding of the unique nature of dementia care in Northern Saskatchewan and the perception of RN's regarding dementia care and services that available to older adults with dementia in northern Saskatchewan.

Appendix H

Pamphlet



Older Adults and Dementia

Little is known about Registered Nurses (RNs) and their work in northern Canada or the care of older adults with dementia in this setting. As the prevalence of dementia is predicted to increase over the next 30 years, the purpose of this study will be to discover key concepts that depict salient issues in dementia care in northern Saskatchewan from the perspective of RNs working in northern health care facilities. A mixed method design has been chosen for this study with a qualitative lead complimented by quantitative data. Concepts emerging from the semi-structured interviews with northern RNs will be identified using the constant comparative method of grounded theory. These concepts will be used to direct a secondary analysis of north-south comparisons from a national survey of rural and remote RNs. It is expected that the exploration of the care of older adults with dementia and the northern work setting will assist in the creation of nursing theory as well as contribute to policy that enhances services to meet the unique needs of northern nurses and northern people.

Northern Nursing

A research study exploring dementia in the older adult population in northern Saskatchewan is looking for participants. If you are an RN and are willing to volunteer to share your experience please fill in this Volunteer form, seal the edges, and mail it to the Mary Ellen Andrews, a PhD student with the College of Nursing, University of Saskatchewan. Results of this study will inform an understanding of the unique nature of dementia care in Northern Saskatchewan and the perception of RN's regarding dementia care and the services that are available to older adults with dementia in northern Saskatchewan.



Volunteer Form

How would you like to be contacted?

By Phone?

- ☐ Between 0800-1200 ☐ This is a work email
☐ Between 1200-1600 ☐ This is a home email
☐ Between 1600-2200 ☐ _____@_____

By Email?

Where would you prefer to have an interview?

In community?

- ☐ Yes ☐ No ☐ Undecided
☐ Yes ☐ No ☐ Undecided

Other location?

May I contact you? ☐

Comments:

Name: (First name only)

Community:

Home phone number:

Work phone number:

College of Nursing

107 Wiggins Road
 Saskatoon, SK, S7N 5E5
 Phone: 1-888-966-8523
 Email: me.andrews@usask.ca

Appendix I

Interview Guide

1. Tell me about your nursing career and the events that led up to your employment in the north.
2. Describe for me a usual day of work.
3. How would you compare your position to a southern nursing position? A rural or more remote position?

As previously described to you, my research interest pertains to the provision of care for cognitively impaired older adults, or older adults with dementias, in northern Saskatchewan. In the questions I am going to ask you now I would like you to focus your answers on this group of individuals in your community or in the Long Term Care facility in your community.

4. To what extent do you work with older adults, clients over 45 years of age?
5. What percentage of your older clients would you classify as having dementia or cognitive impairment?
6. What are the challenges to providing care to this client group in your community or in the inpatient facility in your community?
7. Are there positive aspects to providing care for older adults with dementia in your community or in the inpatient facility in your community?
8. What role does do language barriers or culture play in your interactions with your clients with dementia?
9. Thinking about your present nursing position, without using names, whom do you work with on a daily basis? Of these individuals, when you are

caring for clients with memory problems, whom do you depend on most for assistance?

10. From whom do you receive personal information regarding clients with dementia?
11. Who do you contact regarding professional or clinical information regarding clients with dementia?
12. Are there aspects with regards to your workplace and clients where you think more clinical education would be beneficial? How would that information be best delivered to you and your coworkers?
13. Are there aspects with regards to your workplace and clients where you think more information from the community, or about the community, would be beneficial? How would that information be best delivered to you and your coworkers?
14. Is there anything else you would like to add regarding the care of older adult clients with dementia /cognitive impairment in northern Saskatchewan?
15. If you had to prioritize the issues and concerns we have discussed regarding older adults with dementia, which issues do you find most stressful personally? Professionally?
16. What is the best part about your present position?

Appendix J

Demographic Questionnaire

**An Exploration of Dementia Care
in Northern Saskatchewan:
The Perspective of Northern Registered Nurses.**

**Doctoral Research Project
Mary Ellen Andrews PhD (c)
College of Nursing
University of Saskatchewan**

Date of Interview:

Identification Number:

A. BASIC DEMOGRAPHIC INFORMATION

1) **Gender:** ☐ Female ☐ Male

2) **Age:** ____

3) **Educational background (Mark all that apply)**

	Year Credential Received	Province or Country Received
<input type="checkbox"/> Diploma in Nursing	> _____	_____
<input type="checkbox"/> Bachelor's Degree in Nursing	> _____	_____
<input type="checkbox"/> Masters Degree in Nursing	> _____	_____
<input type="checkbox"/> Doctoral Degree in Nursing	> _____	_____
<input type="checkbox"/> Advanced Nurse Specialist / Nurse Practitioner Diploma	> _____	_____
<input type="checkbox"/> Other (Please Specify) _____	> _____	_____

4) **What year were you first licensed to practice as an RN in Canada?** _____

5) **Registration:**

a. In what province(s) or territory(ies) were you *first* licensed as an RN? _____

b. In what province(s) or territory(ies) are you *currently* licensed? _____

c. How many years have you been licensed to practice as an RN? _____

B. EMPLOYMENT

1) **Nursing employment status:**

- ☐ Full-time/Permanent
- ☐ Part-time/Permanent
- ☐ Job share
- ☐ Casual
- ☐ Contract/Term
- ☐ On leave

2) **Do you have more than one nursing position?**

☐ Yes ☐ No

3) Work setting:

- ☐ General Hospital
- ☐ Mental health centre
- ☐ Nursing station (outpost/nurse clinic)
- ☐ Rehabilitation/convalescent centre
- ☐ Nursing home/Long term care facility
- ☐ Home care
- ☐ Community health agency
- ☐ Business - industry occupational health
- ☐ Private nursing agency/private duty
- ☐ Integrated facility (acute and long-term care)
- ☐ Self-employed
- ☐ Physician's office/family practice unit
- ☐ Educational institution
- ☐ Association/government
- ☐ Other (specify) _____

4) Hours worked: In the last year, have you worked in nursing?

- ☐ Full-time hours
- ☐ More than full-time hours
- ☐ Less than full-time hours

5) a) Area of current practice (Mark *all* that apply)

- ☐ 1 Acute care
- ☐ 2 Long term care
- ☐ 3 Community health
- ☐ 4 Home care
- ☐ 5 Primary care
- ☐ 6 Administration
- ☐ 7 Education
- ☐ 8 Research
- ☐ 9 Other (please specify) _____

b) In which of the above practice areas (Question 6a) do you spend most of your time?

(Mark only *one*)

1 2 3 4 5 6 7 8 9

6) Current position:

- ☐ Chief nursing officer/director
- ☐ Assistant/associate director
- ☐ Supervisor
- ☐ Program Coordinator
- ☐ Head nurse/unit manager
- ☐ Staff nurse
- ☐ Community health nurse
- ☐ Office nurse
- ☐ Occupational health nurse
- ☐ Clinical nurse specialist
- ☐ Nurse Practitioner
- ☐ Educator
- ☐ Researcher
- ☐ Consultant
- ☐ Other (please specify) _____

7) At your primary workplace how many RN positions (in full time equivalents) are there including yourself? _____

8) Are nurses the first contact for health care services in your area?

- ☐ Yes ☐ No

9) Do you use an interpreter to assist you in your work? ☐ Yes ☐ No

10) Is telehealth available at your worksite?

- ☐ Yes ☐ No (if no proceed to question 15)

11) Have you ever used telehealth for continuing nursing education?

- ☐ Yes ☐ No

12) How would you rate your experiences with telehealth for continuing nursing education?

- ☐ Very Good ☐ Good ☐ Satisfactory ☐ Less than satisfactory

13) Have you ever used telehealth for continuing patient assessment/treatment?

- ☐ Yes ☐ No

14) How would you rate your experiences with telehealth for patient assessment/ treatment?

- ☐ Very Good ☐ Good ☐ Satisfactory ☐ Less than satisfactory

15) How long have you been *employed by your primary agency/institution(s)*?

- ☐ Less than 2 years
☐ 2 - 5 years
☐ 6 -9 years
☐ 10 - 14 years
☐ 15 - 19 years
☐ 20 years or more

16) How long have you held *your current primary position*?

- ☐ Less than 2 years
☐ 2 - 5 years
☐ 6 - 9 years
☐ 10 - 14 years
☐ 15 - 19 years
☐ 20 years or more

17) How long have you worked in the north?

- ☐ Less than 2 years
☐ 2 - 5 years
☐ 6 - 9 years
☐ 10 - 14 years
☐ 15 - 19 years
☐ 20 years or more

18) What hours do you work most often?

- ☐ Days (8 hour)
☐ Days (12 hour)
☐ Evenings (8 hour)
☐ Nights (8 hour)
☐ Nights (12 hour)
☐ Rotating (8 hour)
☐ Rotating (12 hour)
☐ Other (please specify) _____

19) How long do you expect to stay in your present job?

- ☐ Less than 1 year
- ☐ 1 - 2 years
- ☐ 2 - 4 years
- ☐ 5 or more years

20) Are you required to be on call for your work?

- ☐ Yes How many hours per month? _____
- ☐ No

NURSING PRACTICE/ NURSING KNOWLEDGE

1) Approximate number of dementia clients that you have cared for in the north in the last year: _____. In your career working in the north? _____.

2) Do you perceive barriers to your participation in continuing education?

- ☐ Yes ☐ No

What are those barriers?

ADDITIONAL DEMOGRAPHIC INFORMATION

1) What size of community did you grow up in?

- ☐ Less than 200
 - ☐ 201 - 500
 - ☐ 501 - 1,000
 - ☐ 1,001 - 2,500
 - ☐ 2,501 - 5,000
 - ☐ 5,001 - 10,000
 - ☐ 10,001 - 20,000
 - ☐ 20,001 - 50,000
 - ☐ 50,001 - 75,000
 - ☐ Over 75,001

2) Are you a Canadian Citizen?

- ☐ Yes ☐ No (If yes move to question 5).

3) Do you have landed immigrant status?

☐ Yes ☐ No

4) Are you in Canada on a work permit?

☐ Yes ☐ No

5) Are you of Aboriginal or Métis ancestry?

☐ Yes ☐ No

6) Do you have any dependent children or other dependent relatives who live with you?

☐ Yes How many _____ ☐ No

7) Current marital status?

- ☐ Married
- ☐ Living with partner
- ☐ Single
- ☐ Divorced
- ☐ Widowed

8) Other areas of nursing in which you have practiced (Mark all that apply).

- ☐ General Hospital
- ☐ Mental health centre
- ☐ Nursing station (outpost/nurse clinic)
- ☐ Rehabilitation/convalescent centre
- ☐ Nursing home/Long term care facility
- ☐ Home care
- ☐ Community health agency
- ☐ Business - industry occupational health
- ☐ Private nursing agency/private duty
- ☐ Integrated facility (acute and long-term care)
- ☐ Self-employed
- ☐ Physician's office/family practice unit
- ☐ Educational institution
- ☐ Association/government
- ☐ Other (specify) _____

General comments about this questionnaire and your interview.

THANK YOU

Appendix K

Nature of Nursing in Rural and Remote Canada Survey Questionnaire



Nursing in Rural and Remote Canada

A National Survey

Confidential when completed

Rural and Remote Nursing Study
Box 92, Royal University Hospital
103 Hospital Drive
Saskatoon, Saskatchewan
Canada S7N 0W8

Tel: (306) 966-6260
Fax: (306) 966-8774

Sequence No:

© Nursing Practice in Rural and Remote Canada, September 2001

<p><i>DIRECTIONS FOR MARKING ANSWERS</i></p> <ul style="list-style-type: none"> • Use pencil only - provided. No pens. • Make the marks heavy and dark. • Make sure the mark fills the circle. • If you make a mistake or change your mind, erase carefully. • Mark only one circle for each question unless directed otherwise. • Write comments on the space provided or on a separate page. 	<p style="text-align: center;">EXAMPLES</p> <p>WRONG ○ ○ ✓ ○ ○</p> <p>WRONG ✗ ○ ○ ○ ○</p> <p>WRONG ○ ○ ○ ● ○</p> <p>RIGHT ○ ● ○ ○ ○</p>
<p><i>INSTRUCTIONS</i> Read all questions carefully. Be as honest as you can when you answer the questions.</p>	

INTRODUCTION

This survey represents a vital first step to examine the nature of nursing practice and the experiences of registered nurses in rural and remote Canada.

The findings of the study will help identify areas of priority for organizational and policy support with respect to the recruitment, retention and education of registered nurses (RNs) in rural and remote Canada. Hopefully, the survey will contribute to improving the work environment for nurses in such settings.

The study is national in scope and is a joint undertaking of researchers and nurses at the Universities of Northern British Columbia, Saskatchewan, Lethbridge, Laurentian, Calgary, Lakehead, Laval, Dalhousie, Queen's, and Manitoba.

It is funded by a research grant from the Canadian Health Services Research Foundation, Nursing Research Fund, the Michael Smith Foundation for Health Research (BC), the Alberta Heritage Foundation for Medical Research, Saskatchewan Economic and Cooperative Development, Ontario Ministry of Health and Long-Term Care, Nova Scotia Health Research Foundation, Nunavut Department of Health and Social Services, the British Columbia Rural and Remote Health Research Institute based in UNBC, and the provincial and territorial nursing associations.

Please answer all questions. Most of the questions have been designed so you can give your answers quickly and easily.

Answer the questions in relation to the nursing position in which you work the most and the community in which you work the most.

Your help is greatly appreciated.

A. BASIC DEMOGRAPHIC INFORMATION

- 1) Province or territory of residence ☐ Newfoundland
☐ Prince Edward Island
☐ Nova Scotia
☐ New Brunswick
☐ Quebec
☐ Ontario
☐ Manitoba
☐ Saskatchewan
☐ Alberta
☐ British Columbia
☐ Yukon
☐ Northwest Territories
☐ Nunavut

- 2) Gender ☐ Female
☐ Male

- 3) Year of birth 19 __ __

- 4) Educational background

	Mark all that apply	Year Received	Province or Country Credential Received (eg. Saskatchewan)
Diploma in Nursing	<input type="radio"/> >	_____	_____
Bachelor's Degree in Nursing	<input type="radio"/> >	_____	_____
Bachelor's Degree in Another Field	<input type="radio"/> >	_____	_____
Masters Degree in Nursing	<input type="radio"/> >	_____	_____
Masters Degree in Another Field	<input type="radio"/> >	_____	_____
Doctoral Degree in Nursing	<input type="radio"/> >	_____	_____
Doctoral Degree in Another Field	<input type="radio"/> >	_____	_____
Advanced Nurse Specialist / Nurse Practitioner Diploma	<input type="radio"/> >	_____	_____
Other (Please Specify) _____	<input type="radio"/> >	_____	_____

- 5) What year were you first licensed to practice as an RN in Canada? _____
- 6) a. In what province(s) or territory(ies) were you *first* licensed as an RN? _____
- b. In what province(s) or territory(ies) are you *currently* licensed? _____
- c. How many years have you been licensed to practice as an RN? _____

B. EMPLOYMENT

- 1) Employment status ☐ Employed in nursing
☐ Employed in other than nursing - seeking employment in nursing
☐ Employed in other than nursing - not seeking employment in nursing
☐ Not employed and seeking employment in nursing
☐ Not employed and not seeking employment in nursing
☐ Not stated
- 2) Do you have more than one ☐ Yes
nursing position? ☐ No
- 3) Nursing employment status ☐ Full-time/Permanent
(Mark all that apply) ☐ Part-time/Permanent
☐ Job share
☐ Casual
☐ Contract/Term
☐ Not employed
- 4) Work setting ☐ General Hospital
(Mark most appropriate ☐ Mental health centre
category - choose only one) ☐ Nursing station (outpost/nurse clinic)
☐ Rehabilitation/convalescent centre
☐ Nursing home/Long term care facility
☐ Home care
☐ Community health agency
☐ Business - industry occupational health
☐ Private nursing agency/private duty
☐ Integrated facility (acute and long-term care)
☐ Self-employed
☐ Physician's office/family practice unit
☐ Educational institution
☐ Association/government
☐ Other (specify) _____

- 5) Hours worked: In the last year, have you worked in nursing? ☐ Full-time hours
☐ More than full-time hours
☐ Less than full-time hours
- 6) a) Area of current practice ☐ 1 Acute care
(Mark *all* that apply) ☐ 2 Long term care
☐ 3 Community health
☐ 4 Home care
☐ 5 Primary care
☐ 6 Administration
☐ 7 Education
☐ 8 Research
☐ 9 Other
(please specify) _____
- b) In which of the above practice areas (Question 6a) do you spend most of your time?
(Mark only *one*)
- ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9
- 7) Current position ☐ Chief nursing officer/director
☐ Assistant/associate director
☐ Supervisor
☐ Program Coordinator
☐ Head nurse/unit manager
☐ Staff nurse
☐ Community health nurse
☐ Office nurse
☐ Occupational health nurse
☐ Clinical nurse specialist
☐ Nurse Practitioner
☐ Educator
☐ Researcher
☐ Consultant
☐ Other (please specify) _____

C. COMMUNITY/AGENCY

1) What is your *work* postal code? (first four characters to ensure confidentiality) _ _ _ _ X X

2) How far is your current *work community* from a major centre of 50,000 or greater population?

_____ miles or _____ kilometres

3) Do you consider your workplace remote? ☐ Yes ☐ No

4) Do you consider your workplace rural? ☐ Yes ☐ No

[ANSWER THESE QUESTIONS IN TERMS OF THE RURAL/REMOTE COMMUNITY IN WHICH YOU WORK THE MOST.]

5) Are you currently working in a community only accessible by plane?

 ☐ Yes ☐ No (Skip to Question 6)

How frequent are scheduled air flights into the community? (Mark one)

- ☐ Once per day or more
- ☐ Once per week or more
- ☐ Once per month or more
- ☐ No scheduled flights - charter only

6) What type of *ownership* best describes the facility in which you work the most? (Mark one)

- ☐ Private for profit facility
- ☐ Private non-profit / not for profit
- ☐ Local Health Board
- ☐ Municipal government
- ☐ Provincial/territorial government
- ☐ Tribal Council/band
- ☐ Federal government
- ☐ Don't know
- ☐ Other (please specify) _____

7) Do you feel the community is supportive of the health agency you work for?

- ☐ Very supportive
- ☐ Somewhat supportive
- ☐ Neutral
- ☐ Unsupportive
- ☐ Very unsupportive

8) At your primary workplace how many RN positions (in full time equivalents) are there including yourself?

Number _____

9) Are nurses the first contact for health care services in your area?

☐ Yes ☐ No

10) Do you use an interpreter to assist you in your work?

☐ Yes ☐ No

11) Which of the following **health services** are available on site in your work community?
(Mark all that apply)

	Available Daily	Available Weekly	Available Monthly	Available Every 2 to 6 months	Available Every 7 to 12 months	Not Available
Dental	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Physiotherapist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Home care	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hospital	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Family physician services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Public health services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pharmacy services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Occupational Therapy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mental Health services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Specialist - medical	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nutritionist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Alternative health practitioner ...	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12) Are there family physicians living in the community in which you work the most?

☐ Yes ☐ No

How many? Number _____

13) Do medical specialists (other than family physicians) live in your community?

☐ Yes ☐ No

14) In general how long have the physicians
resided in the community? *# of Physicians*
(Mark all that apply)

- ☐ Between 1 and 2 years _____
- ☐ Between 2 to 5 years _____
- ☐ Between 5 to 10 years _____
- ☐ More than 10 years _____
- ☐ Don't know _____

15) Do you work with student

	Yes	No
physicians	<input type="radio"/>	<input type="radio"/>
nurses	<input type="radio"/>	<input type="radio"/>
physiotherapists	<input type="radio"/>	<input type="radio"/>
other (please specify) _____	<input type="radio"/>	<input type="radio"/>

16) Do you have direct access in your workplace via the computer to other information sources such as those on the Internet for your use in nursing practice? (This computer usage is not to be confused with using a unit computer for normal client care.)

☐ Yes
☐ No
☐ Don't know

17) Is 'Telehealth' available at your work site? That is the use of advanced telecommunication technologies to exchange health information and provide health care services across geographic and time barriers.

☐ Yes
☐ No
☐ Don't know



How satisfied are you with the availability and use of Telehealth in your area?

Very Satisfied	Somewhat Satisfied	Somewhat Dissatisfied	Very Dissatisfied
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18) Briefly describe any unique characteristics of the clients that you serve, e.g. ethnicity, age, gender, language, poverty, etc.

1. _____
2. _____
3. _____
4. _____
5. _____

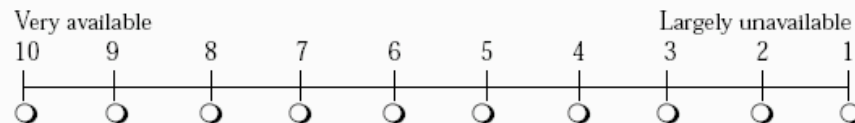
- 19) Do you have a support network of colleagues who provide consultation and/or professional support?

☐ Yes ☐ No

- 20) What disciplines are represented in your consultation/professional support network?

- ☐ Nursing
☐ Medicine (family practice, specialists)
☐ Other health professionals (e.g., pharmacy, physical therapy, dentistry)
☐ Other non-health
☐ Don't have one

- 21) Are colleagues available to you for consultation when you need them? Indicate availability by filling the circle on the 10-point scale below.



- 22) On what basis does this contact take place? (Mark all that apply)

- ☐ Face-to-face
☐ Telephone
☐ E-mail

- 23) How far is it to the closest *basic referral centre* - that is the closest community with basic specialty services such as general internal medicine, general surgery, ophthalmology, orthopedic surgery and radiology?

_____ kms or _____ miles

- 24) How far is it to the closest *advanced referral centre* - that is, a major metropolitan centre with sub-specialty services such as cardiac surgery, neurosurgery, pediatric surgery, radiation oncology and hematology?

_____ kms or _____ miles

- 25) How long have you been *employed by your primary agency/institution(s)*?

- ☐ Less than 2 years
☐ 2 - 5 years
☐ 6 - 9 years
☐ 10 - 14 years
☐ 15 - 19 years
☐ 20 years or more

- 26) How long have you held *your current primary position*?
- ☐ Less than 2 years
 - ☐ 2 - 5 years
 - ☐ 6 - 9 years
 - ☐ 10 - 14 years
 - ☐ 15 - 19 years
 - ☐ 20 years or more
- 27) Would you say:
- | | Agree | Agree somewhat | Disagree somewhat | Disagree | Not applicable |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| a. I am happy with the community in which I work. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b. I am frequently recognized in public by clients. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c. I am bothered when I am recognized in public by clients. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d. When I'm not at work, people frequently ask me for professional advice. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e. I am bothered when people ask for professional advice when I'm not at work. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
- 28) What is the population of the place in which you *live*?
- ☐ Farm/acreage
 - ☐ 200 or less
 - ☐ 201 - 500
 - ☐ 501 - 1,000
 - ☐ 1,001 - 2,500
 - ☐ 2,501 - 5,000
 - ☐ 5,001 - 10,000
 - ☐ 10,001 - 20,000
 - ☐ 20,001 - 50,000
 - ☐ 50,001 - 75,000
 - ☐ Over 75,000
- 29) What is the population of the village/town/city in which you *work*?
- ☐ 200 or less
 - ☐ 201 - 500
 - ☐ 501 - 1,000
 - ☐ 1,001 - 2,500
 - ☐ 2,501 - 5,000
 - ☐ 5,001 - 10,000
 - ☐ 10,001 - 20,000
 - ☐ 20,001 - 50,000
 - ☐ 50,001 - 75,000
 - ☐ Over 75,000

30) What is your home postal code? (first four characters to ensure confidentiality) _ _ _ _ X X

31) How satisfied are you with the following aspects of your home community (where you live) at this time? (Rate each dimension on a five-point scale from 'not satisfied' to 'very satisfied'.)

	Not satisfied			Very satisfied	
	1	2	3	4	5
a. Friendly community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Trusting community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Social/recreational opportunities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Quality of schools (K-12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Safety	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Ability to stay current in your practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Level of anonymity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. Consulted on work issues outside of work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. Size of community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k. Distance away from major centre	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
l. Overall community satisfaction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

D. HOURS OF WORK/STABILITY/BENEFITS

- 1) What hours do you work most often? ☐ Days (8 hour)
☐ Days (12 hour)
☐ Evenings (8 hour)
☐ Nights (8 hour)
☐ Nights (12 hour)
☐ Rotating (8 hour)
☐ Rotating (12 hour)
☐ Other (please specify) _____

Scheduling

2) In my work situation:

	<i>Agree</i>	<i>Agree somewhat</i>	<i>Disagree somewhat</i>	<i>Disagree</i>	<i>Not applicable</i>
a. My work schedule is satisfactory	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. I am satisfied with the number of hours I work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. I am satisfied with the flexibility in overall scheduling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

↓

- 6) My job security is good.
- | | | | |
|----------------------|----------|-------|-------------------|
| Strongly
disagree | Disagree | Agree | Strongly
agree |
| ○ | ○ | ○ | ○ |
| 1 | 2 | 3 | 4 |
- 7) In your main area of work:
- a. If you are employed on a casual basis (i.e., non-permanent), is this by your choice?
- ☐ Yes
☐ No (Skip to Question 8)
☐ Not applicable (Skip to Question 8)
- b. How long have you been casual? _____ Years _____ Months
- c. Have you been laid off in the last 5 years? ☐ Yes ☐ No (Skip to Question 8)
- d. How many times were you laid off in the last 5 years? _____ times
- e. Were you rehired by the same organization? ☐ Yes ☐ No
- 8) Have you changed organizations or positions in the last 5 years *due to downsizing*?
- ☐ Yes, my choice
☐ Yes, required by organization
☐ No
- 9) How adequate was the orientation provided by your current organization to meet your learning needs?
- ☐ Not at all adequate
☐ Somewhat adequate
☐ Mostly adequate
☐ Very adequate
- 10) How many hours per month do you spend travelling *to* your main nursing job?
- _____ Hours _____ Minutes ☐ Not applicable
- 11) In a typical day how much time do you spend travelling *as part of* your job?
- _____ Hours _____ Minutes ☐ Not applicable

12) What is the impact of work-related travel on your life?

Travel to work: _____

Travel for work: _____

Benefits

13) *Which benefits do you currently receive from your employer/contractor?*

14) *Indicate level of importance to you.*

	Yes	No	
a) Extended health insurance	<input type="radio"/>	<input type="radio"/>	→
b) Dental insurance	<input type="radio"/>	<input type="radio"/>	→
c) Daycare (child/elder)	<input type="radio"/>	<input type="radio"/>	→
d) Vacation/holidays	<input type="radio"/>	<input type="radio"/>	→
e) Sick/maternity leave	<input type="radio"/>	<input type="radio"/>	→
f) Tuition reimbursement	<input type="radio"/>	<input type="radio"/>	→
g) Isolation allowance	<input type="radio"/>	<input type="radio"/>	→
h) Banked time	<input type="radio"/>	<input type="radio"/>	→
i) Payment of provincial/territorial health care premium (if not applicable, leave blank)	<input type="radio"/>	<input type="radio"/>	→
j) Continuing education support	<input type="radio"/>	<input type="radio"/>	→
k) Travel and sustenance support to facilitate continuing education	<input type="radio"/>	<input type="radio"/>	→
l) Professional registration fee	<input type="radio"/>	<input type="radio"/>	→
m) Family day leave	<input type="radio"/>	<input type="radio"/>	→
n) Pension benefits	<input type="radio"/>	<input type="radio"/>	→

[illegible]

- Yes No
- o) Salary continuance plan for chronic illness ... ☐ ☐ →
- p) Employer's vehicle for work related travel ☐ ☐ →
- q) Cell/mobile phone ☐ ☐ →
- r) Other (please specify) ☐ ☐ →

Very important ↓	Important ↓	Neutral ↓	Unimportant ↓	Very unimportant ↓
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

E. NURSING PRACTICE

- 1) Do you regularly perform any of the following nursing procedures as part of your *current nursing practice*? Mark *all* that apply.

- | | Yes | No |
|---|-----------------------|-----------------------|
| a. Pre-natal care | <input type="radio"/> | <input type="radio"/> |
| b. Management of labor | <input type="radio"/> | <input type="radio"/> |
| c. Management of delivery | <input type="radio"/> | <input type="radio"/> |
| d. Immunizations | <input type="radio"/> | <input type="radio"/> |
| e. Post-natal care | <input type="radio"/> | <input type="radio"/> |
| f. Suturing | <input type="radio"/> | <input type="radio"/> |
| g. Taking x-rays | <input type="radio"/> | <input type="radio"/> |
| h. Dispensing (not administrating) medication | <input type="radio"/> | <input type="radio"/> |
| i. Prescribing medication | <input type="radio"/> | <input type="radio"/> |
| j. Audiometry | <input type="radio"/> | <input type="radio"/> |
| k. Refraction | <input type="radio"/> | <input type="radio"/> |
| l. Casting/splinting | <input type="radio"/> | <input type="radio"/> |
| m. Ordering diagnostic tests | <input type="radio"/> | <input type="radio"/> |
| n. Performing diagnostic tests | <input type="radio"/> | <input type="radio"/> |
| o. Interpreting diagnostic tests | <input type="radio"/> | <input type="radio"/> |
| p. Pulmonary function testing | <input type="radio"/> | <input type="radio"/> |
| q. Performing pap smears | <input type="radio"/> | <input type="radio"/> |
| r. Joint injection / aspiration | <input type="radio"/> | <input type="radio"/> |
| s. Needle aspiration (for diagnosis/biopsy) | <input type="radio"/> | <input type="radio"/> |
| t. Culturing tissue samples | <input type="radio"/> | <input type="radio"/> |
| u. Evacuating patients | <input type="radio"/> | <input type="radio"/> |

	Yes	No
v. Direct referral to an allied health professional (e.g. physiotherapist)	<input type="radio"/>	<input type="radio"/>
w. Direct referral to a medical specialist	<input type="radio"/>	<input type="radio"/>
x. Pronouncing death	<input type="radio"/>	<input type="radio"/>
y. Other	<input type="radio"/>	<input type="radio"/>

- 2) With respect to the above nursing procedures (Question E1) which, if any, have required certification by your employer? ☐ None

Item Letter	Description
_____	_____
_____	_____
_____	_____

- 3) Have you facilitated health promotion activities in your community? ☐ Yes ☐ No

Give an example: _____

- 4) Are there nursing practice and decision-making skills that you perform on an advanced level in your area of practice? ☐ Yes ☐ No (Skip to Question 5)

Please explain: _____

- 5) Which of the following best describes your *average* day of practice? (Please mark all responses which you believe reflect your role)

- I am required to work with many different kinds of patients ☐
- Nothing in my day is routine, the workload dictates my role ☐
- I use protocols specific to advanced nursing practice ☐
- I usually have one nursing role but am required to take on other roles depending on demand ☐
- I think of my role as advanced nursing practice ☐

F. ATTITUDES ABOUT NURSING

The following items represent statements about how satisfied you are with **YOUR MAIN CURRENT NURSING POSITION**. Please respond to each item. It may be difficult to fit your responses into the eight categories. In that case, select the category that *comes closest* to your response to the statement. It is very important that you give your *honest* opinion. Please do not go back and change any of your answers.

	Strongly agree	Agree	Mildly or somewhat agree	Undecided	Mildly or somewhat disagree	Disagree	Strongly disagree	Not applicable
1) My present salary is satisfactory.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2) The nursing personnel in this organization do not hesitate to pitch in and help one another out when things get in a rush.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3) Physicians in general cooperate with nursing staff at my organization.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4) New employees are not quickly made to feel at home in this organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5) I have no doubt in my mind that what I do on my job is really important.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6) There is a great gap between the administration of this organization and the daily problems of the nursing service.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7) Considering what is expected of nursing personnel at this organization, the pay we get is reasonable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8) A good deal of teamwork is present between various levels of nursing personnel in this organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9) I have too much responsibility and not enough authority.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10) This organization offers opportunities for advancement/promotion.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11) There is a lot of teamwork between nurses and doctors at my organization.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12) The present rate of pay for nursing service personnel at this organization is not satisfactory.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13) The nursing personnel in this organization are not as friendly and outgoing as I would like.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14) There is ample opportunity for nursing staff to participate in the administrative decision-making process.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15) A great deal of independence is permitted, if not required, of me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	<i>Strongly agree</i>	<i>Agree</i>	<i>Mildly or somewhat agree</i>	<i>Undecided</i>	<i>Mildly or somewhat disagree</i>	<i>Disagree</i>	<i>Strongly disagree</i>	<i>Not applicable</i>
16) What I do on my job does not add up to anything really significant.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17) There is a lot of "rank consciousness" in this organization: nurses seldom mingle with those with less experience or with other professionals or staff.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18) I am sometimes frustrated because all of my activities seem programmed for me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19) I am sometimes required to do things on my job that are against my better professional nursing judgement.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20) Based on feedback from nurses in other organizations, the pay at this organization is fair.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21) I am proud to talk to other people about what I do on my job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22) I wish the physicians here would show more respect for the skill and knowledge of the nursing staff.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23) Physician(s) working with this organization generally understand and appreciate what the nursing staff does.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24) If I had the decision to make all over again, I would still go into nursing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25) The physician(s) working at this agency look down too much on the nursing staff.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26) I have all the voice in planning policy and procedures that I want.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27) My particular job really doesn't require much skill or "know-how"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28) The nursing administrators generally consult with the staff on daily problems and procedures. .	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29) I have the support of my supervisor to make important decisions in my work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30) Pay scales for nursing personnel need to be upgraded	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
31) Overall, I am very satisfied with my job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

G. ABOUT YOUR NURSING POSITION

The following are statements concerning your *current nursing position*. Please answer each question by marking off the one answer that best fits your current situation. Sometimes none of the answers fit exactly; please choose the answer that comes closest.

	Strongly agree	Agree	Disagree	Strongly disagree
1) My nursing position requires that I learn new things	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2) My nursing position involves a lot of repetitive work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3) My nursing position requires me to be creative.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4) My nursing position allows me to make a lot of decisions on my own.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5) My nursing position requires a high level of skill.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6) On my job, I have very little freedom to decide how I do my work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7) I get to do a variety of different things in my job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8) I have a lot of say about what happens on my job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9) I have an opportunity to develop my own special abilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10) My job requires working very fast	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11) My job requires working very hard.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12) My job requires lots of physical effort.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13) I am not asked to do an excessive amount of work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14) I have enough time to get the job done.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15) I am free from conflicting demands that others make	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16) What is the most important thing to you about your nursing position?

H. YOUR HEALTH

Please rate your level of satisfaction with your general health.

- 1) Are you satisfied or dissatisfied with:

	Very satisfied	Somewhat satisfied	Somewhat dissatisfied	Very dissatisfied
Your health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your job or main activity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your life in general	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- 2) In general, would you say your health is:
- ☐ Excellent
 - ☐ Very good
 - ☐ Good
 - ☐ Fair
 - ☐ Poor

- 3) The following questions are about activities you might do during a typical day. Does *your health now limit you* in these activities? If so, how much?

	Yes, limited a lot	Yes, limited a little	No, not limited at all
a. Moderate activities, such as moving a table, pushing a vacuum cleaner, gardening, or playing sports (curling, golf).....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Climbing several flights of stairs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- 4) During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
a. Accomplished less than you would like.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Were limited in the kind of work or other activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- 5) During the **past 4 weeks**, have you had any of the following problems with your work or other regular daily activities as a **result of any emotional problems** (such as feeling depressed or anxious)?

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
a. Accomplished less than you would like.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Did work or other activities less carefully than usual.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- 6) During the **past 4 weeks**, how much did **pain** interfere with your normal work (including both work outside the home and housework)?

Not at all	A little bit	Moderately	Quite a bit	Extremely
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- 7) These questions are about how you feel and how things have been with you during the **past 4 weeks**. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the **past 4 weeks**

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
a. have you felt calm and peaceful?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. did you have a lot of energy?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. have you felt down-hearted and depressed?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- 8) During the **past 4 weeks**, how much of the time has your **physical health or emotional problems** interfered with your social activities (like visiting friends, relatives, etc.)?

All of the time	Most of the time	Some of the time	A little of the time	None of the time
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- 9) Have you ever taken a sick day due to stressors experienced on the job ('mental health day')?

☐ Yes > How many days in the last year? _____

☐ No

- 10) Have you ever taken a formal (paid) stress leave? ☐ Yes ☐ No (Skip to Section I)

What caused the stress leave?

☐ Personal/family emotional stress

☐ Critical incident stress

☐ Other work related stress

I. YOUR FEELINGS AND THOUGHTS DURING THE LAST MONTH

We'd like you to tell us **how often** you felt or thought a certain way. The best way is to answer each question fairly quickly; don't try to count up the number of times you felt a certain way, just mark the choice that seems like a reasonable estimate.

For each question fill in the circle for the category that corresponds to your answer.

	<i>Never</i>	<i>Almost never</i>	<i>Sometimes</i>	<i>Fairly often</i>	<i>Very often</i>
1) In the last month, how often have you felt that you were <i>not able to control</i> the important things in your life?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2) In the last month, how often have you <i>felt confident</i> about your ability to handle your personal problems?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3) In the last month, how often have you felt that <i>things were going your way</i> ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4) In the last month, how often have you felt <i>difficulties were piling up</i> so high that you could not overcome them?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

J. ABOUT YOUR WORKPLACE

Staffing

- 1) Thinking about your primary workplace, do you agree or disagree with the following statements?

	<i>Agree</i>	<i>Agree somewhat</i>	<i>Disagree somewhat</i>	<i>Disagree</i>	<i>Not applicable</i>
a. There is adequate RN staffing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. There is adequate support staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. The "staff mix" is appropriate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Environment at Work

	Agree	Agree somewhat	Disagree somewhat	Disagree	Not applicable
2) a. The equipment needed for care is available.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. The equipment needed for care is up-to-date	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Equipment is maintained and ready for use.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. The personnel are trained to use the available equipment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. The work area is too noisy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Nursing care supplies are available when needed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. I feel physically safe during the day while at work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. I feel physically safe during the evening/night while at work. ...	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Violence in the Workplace

The intent of this series of questions is to gain an understanding of the amount and type of violence experienced by nurses in the workplace. Please use the following definition of violence as you answer these questions.

Violence against nurses or nurse abuse is defined in this study as an incident where a nurse experiences any of the following:

- physical assault (e.g. being spit on, bitten, hit, pushed)
- threat of assault (verbal or written threats intending harm)
- emotional abuse such as hurtful attitudes or remarks (insults, gestures, humiliation before the work team, coercion)
- verbal sexual harassment (repeated, unwanted intimate questions or remarks of a sexual nature)
- sexual assault (any forced physical sexual contact including forcible touching and fondling, any forced sexual acts including forcible intercourse)

The time period is the past 4 weeks you worked.

- 3) In the *past 4 weeks that you worked*, did you experience any of the following while carrying out your responsibilities as a nurse? Indicate **all that apply** and the type of person(s) who was(were) the perpetrator(s) of the incident(s).

	NO	YES		PERPETRATOR					
				Patient/ Client	Family/ Visitor	Physician	Nursing Co-worker	Community Member	Other
a. Physical assault	<input type="radio"/>	<input type="radio"/>	>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Threat of assault	<input type="radio"/>	<input type="radio"/>	>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Emotional abuse	<input type="radio"/>	<input type="radio"/>	>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Verbal / sexual harassment	<input type="radio"/>	<input type="radio"/>	>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Sexual assault	<input type="radio"/>	<input type="radio"/>	>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



If all NO skip to Section K, page 24.

Comment:

- 4) If the perpetrator was a patient/client, what was their primary diagnosis? ☐ Alcohol/drug problem
☐ Other psychiatric
☐ Dementia
☐ Other diagnoses
☐ Not applicable
- 5) What was the most frequent context of the above incident(s) in your workplace? ☐ Admission
(Mark appropriate answer) ☐ Personal care
☐ Social activity
☐ Talking to client
☐ Unprovoked - no care being given
☐ Other (specify) _____

- 6) Consider *the most distressing incident* at work and then decide how accurate each statement is in describing how you felt.

	Agree strongly	Agree moderately	Mixed/Not sure	Disagree moderately	Disagree strongly
a. I never expected this to happen to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. I feared for my life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. I was afraid I would be seriously injured.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. My sleep was disturbed by this incident.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. The perpetrator became aggressive with me because my racial origin is different from theirs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. I needed emotional support after this incident.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. I expect to be hit by clients, it is just part of the job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. I want education on how to deal effectively with aggressive clients.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

K. NURSING KNOWLEDGE

- 1) Please mark whether you *agree*, *somewhat agree*, *somewhat disagree* or *disagree* with the following statements:

	Agree	Agree somewhat	Disagree somewhat	Disagree	Not applicable
a. I feel my knowledge is current	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. I have access to current information that would help me in my job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. I know how to operate any special equipment where I work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. There is always someone I can call to help me with equipment problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Adequate orientation is provided for nurses changing practice areas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. I have enough opportunities to attend continuing education/ staff development events	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. My employer encourages staff to attend continuing education/ staff development events.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. I have opportunities to share with others what I have learned at continuing education/ staff development events.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- 2) In the last twelve months have you undertaken any of the following activities associated with your work (please mark all that apply)?

	Yes	No
a. Subscribed to a journal	<input type="radio"/>	<input type="radio"/>
b. Read a journal article	<input type="radio"/>	<input type="radio"/>
c. Read a 'professional' textbook	<input type="radio"/>	<input type="radio"/>
d. Participated in a Telehealth conference	<input type="radio"/>	<input type="radio"/>
e. Done a computer-based literature search on a nursing/disease topic	<input type="radio"/>	<input type="radio"/>
f. Enrolled in/completed a course at a University	<input type="radio"/>	<input type="radio"/>
g. Enrolled in/completed a course at a Community College	<input type="radio"/>	<input type="radio"/>
h. Other	<input type="radio"/>	<input type="radio"/>

(Please specify _____)

- 3) How do you get *new* information on nursing practice? Indicate which sources you find most useful.

			USEFULNESS			
	Don't use	Use	Very useful	Somewhat useful	Not particularly useful	Useless
a. Internet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Library	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Newsletter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Journal subscription ...	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Journal club	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Nursing colleagues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Inservice at work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Continuing education programs outside workplace	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. Other work colleagues (non-nursing)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(Please specify) _____						

- 4) a. Do you perceive barriers to your participation in continuing education?

☐ Yes ☐ No (Skip to Section L)

- b. What are those barriers?

L. CAREER PLANS

- 1) Thinking about the next 12 months, how likely do you think it is that you will lose your job or be laid off?
- ☐ Very likely
☐ Fairly likely
☐ Not too likely
☐ Not at all likely
- 2) Do you plan to leave your present nursing position?
- ☐ Yes, within the next 6 months
☐ Yes, within the next 12 months
☐ No plans within the next year
- 3) If you were looking for another job, how easy or difficult do you think it would be for you to find a satisfactory job in nursing?
- ☐ Very easy
☐ Fairly easy
☐ Fairly difficult
☐ Very difficult
- 4) Thinking about the next five years, do you plan to: (Mark *all* that apply)
- ☐ Continue nursing in the same location
☐ Relocate within the province where you are currently nursing
☐ Relocate to nurse in another province in Canada
☐ Leave Canada to nurse in another country
☐ Go back to school for further education and training *within* nursing
☐ Go back to school for further education and training *outside of* nursing
☐ Move because of family commitments
☐ Move from a rural/isolated community to a large community
☐ Retire
☐ None of the above
- 5) Have you been employed outside of nursing in the last 2 years? ☐ Yes ☐ No
- 6) In your community or nearby are there attractive employment opportunities *outside* of nursing? ☐ Yes ☐ No
- 7) In your community or nearby are there attractive employment opportunities *in* nursing? ☐ Yes ☐ No
- 8) How long do you expect to stay in your present job?
- ☐ Less than 1 year
☐ 1 - 2 years
☐ 2 - 4 years
☐ 5 or more years
- 9) Have you looked for other employment opportunities within the past year?
- ☐ Yes → ☐ In nursing ☐ No
☐ Non nursing
☐ Both

M. ADDITIONAL DEMOGRAPHIC QUESTIONS

- 1) What size of community did you grow up in? ☐ Less than 200
☐ 201 - 500
☐ 501 - 1,000
☐ 1,001 - 2,500
☐ 2,501 - 5,000
☐ 5,001 - 10,000
☐ 10,001 - 20,000
☐ 20,001 - 50,000
☐ 50,001 - 75,000
☐ Over 75,001
- 2) Are you a Canadian Citizen? ☐ Yes (Skip to Question 3)
☐ No
↓
Do you have landed immigrant status? ☐ Yes (Skip to Question 3)
☐ No
↓
Are you in Canada on a work permit? ☐ Yes
☐ No
- 3) Are you of Aboriginal or Metis ancestry? ☐ Yes
☐ No
- 4) Do you have any dependent children or other dependent relatives who live with you? ☐ Yes → How many _____
☐ No
- 5) Current marital status? ☐ Married
☐ Living with partner
☐ Single
☐ Divorced
☐ Widowed

- 6) If currently married or living with partner, what is their occupation?

- 7) Here is a list of gross (before taxes and deductions) categories that correspond to various income levels. What is your current income from *nursing* in the past year (including overtime)?

Yearly	Monthly
<input type="radio"/> Less than \$9,999	Up to \$833
<input type="radio"/> \$10,000 to \$19,999	\$834 - \$1,666
<input type="radio"/> \$20,000 to \$29,999	\$1,667 - \$2,499
<input type="radio"/> \$30,000 to \$39,999	\$2,500 - \$3,333
<input type="radio"/> \$40,000 to \$49,999	\$3,334 - \$4,166
<input type="radio"/> \$50,000 to \$59,999	\$4,167 - \$4,999
<input type="radio"/> \$60,000 to \$69,999	\$5,000 - \$5,833
<input type="radio"/> \$70,000 or more	\$5,834 +

- 8) What percentage of your *nursing income* was from overtime work? ____ %

- 9) What percentage of your *nursing income* was from isolation allowances? ____ %

- 10) What is your best estimate of the **total income** from all sources (eg. jobs, social security, investments, etc.), before taxes and other deductions, of *all household members* in the past 12 months? (For small businesses and farms after expenses.)

Yearly	Monthly
<input type="radio"/> Less than \$9,999	Up to \$833
<input type="radio"/> \$10,000 to \$19,999	\$834 - \$1,666
<input type="radio"/> \$20,000 to \$29,999	\$1,667 - \$2,499
<input type="radio"/> \$30,000 to \$39,999	\$2,500 - \$3,333
<input type="radio"/> \$40,000 to \$49,999	\$3,334 - \$4,166
<input type="radio"/> \$50,000 to \$59,999	\$4,167 - \$4,999
<input type="radio"/> \$60,000 to \$69,999	\$5,000 - \$5,833
<input type="radio"/> \$70,000 to \$79,999	\$5,834 - \$6,666
<input type="radio"/> \$80,000 to \$99,999	\$6,667 - \$8,333
<input type="radio"/> \$100,000 to \$119,999	\$8,334 - \$9,999
<input type="radio"/> \$120,000 +	\$10,000 +

N. COMMENTS

Reflections on your role as a rural/remote nurse.

- 1) How do you define rural/remote?

- 2) What was your reason for accepting your present position?

- 3) In what way is your role as a rural/remote nurse different from other nursing roles you have had?

- 4) How has your education prepared you for your job as a *rural or remote nurse*? Did some elements of your training and education prepare you well? Were other elements of your training and education not particularly useful? Please comment.

- 5) Do you have any final comments - either complaints, problems or positive experiences about nursing in rural or remote Canada?

PLEASE FEEL FREE TO WRITE ADDITIONAL COMMENTS AND ATTACH.

RESPONDENTS WHO WISH TO VERBALLY RELATE THEIR EXPERIENCES OR WRITE ABOUT THEM ARE INVITED TO CONTACT STUDY INVESTIGATORS AT 1-866-960-6409 OR AT <http://ruralnursing.unbc.ca> AS THEY ARE COLLECTING MORE DETAILED NARRATIVE COMMENTS.

General comments about this questionnaire.

THANK YOU

Appendix L

Nature of Nursing in Rural and Remote Canada Survey Questionnaire Letter for Participant Consent



The Nature of Nursing Practice in Rural and Remote Canada

September 2001

Dear Nursing Colleague:

Principal Investigators

Matha MacLeod, PhD, RN
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British Columbia
(PI - Project and Narratives)

Judith Kulig, DNSc, RN
University of Lethbridge
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(PI - Registered Nurse Database)

Norma Stewart, PhD, RN
University of Saskatchewan
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Barbara Smith, BSN, MEd., RN
University of Saskatchewan

Principal Decision Maker

Marian Knack
Ministry of Health
British Columbia

Advisory Team

19 Members from all
provinces and territories

We are writing to ask your help in a study on nursing in rural and remote Canada. We wish to learn more about nurses in rural and remote Canada: Who are they? What is the nature of nursing practice in rural and remote areas? How satisfied are they with their current work situations and the profession of nursing?

It is our understanding that you are a registered nurse practicing in a rural or remote part of Canada. Provincial nursing associations identified such nurses from their registration lists. Though this study is being independently conducted by university based researchers, provincial nursing associations are interested in the findings from the study, have endorsed it, and are facilitative of our research efforts by mailing this questionnaire.

This survey will be used to inform policy and program development with regard to nursing in rural and remote areas. By knowing more about the job skills and nursing practice of rural/remote nurses, health agencies, educators and the nursing profession can make the most of what these nurses do to contribute to the health of their communities and do a better job of improving the work environment and quality of working life.

The results of the survey will form the basis of a report to the funding agencies and various governing bodies. An executive summary will be made widely available to study participants (upon request, see enclosed form), the media and will be available on the study website (see below). Various aspects of the survey results will also form the basis of articles submitted to peer-reviewed journals for publication.

Your answers are completely anonymous and confidential, and will be released only as summaries in which no individual's answers can be identified. As the provincial nursing associations mail the questionnaire, we do not know the identity of any of those whom this questionnaire is being sent. When you return your completed questionnaire in the enclosed stamped envelope, the sequence number on the envelope is used to delete your name from the nursing association's mailing list for the survey. Your name is never connected to your answers in any way. This survey is voluntary, however, your input is invaluable. It would be greatly appreciated if you can help us by taking about forty-five minutes to share your experiences and opinions with us. If for some reason you prefer not to respond, please let us know by returning the blank questionnaire in the enclosed stamped envelope.

Please complete the enclosed questionnaire using the special pencil provided, and keep it as a small token of appreciation, as a way of saying thanks for your help.

If you have any questions or comments about this survey, we would be happy to talk with you. Our number is (306) 966-6260 (collect), or you can fax or write us at either address at the bottom of this letter.

For more details on the study check our website at <http://ruralnursing.unbc.ca>.

Thank you very much for helping with this important study.

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Appendix M

Map of Census Divisions North-South Data



Appendix N

Census and North-South Comparison Map

